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# The CHEMIST AND DRUGGIST

or RETAILER - WHOLESALE - MANUFACTURER

ished 1859

28 Essex Street, Strand, London, W.C.2

Registered as a Newspaper

3420  
XLIV

AUGUST 25, 1945

Annual Subscription (with  
Diary) 25/-. Single copies 9d.



TRADE MARK **'MERTHIOLATE'** BRAND

Sodium Ethyl Mercuri Thiosalicylate

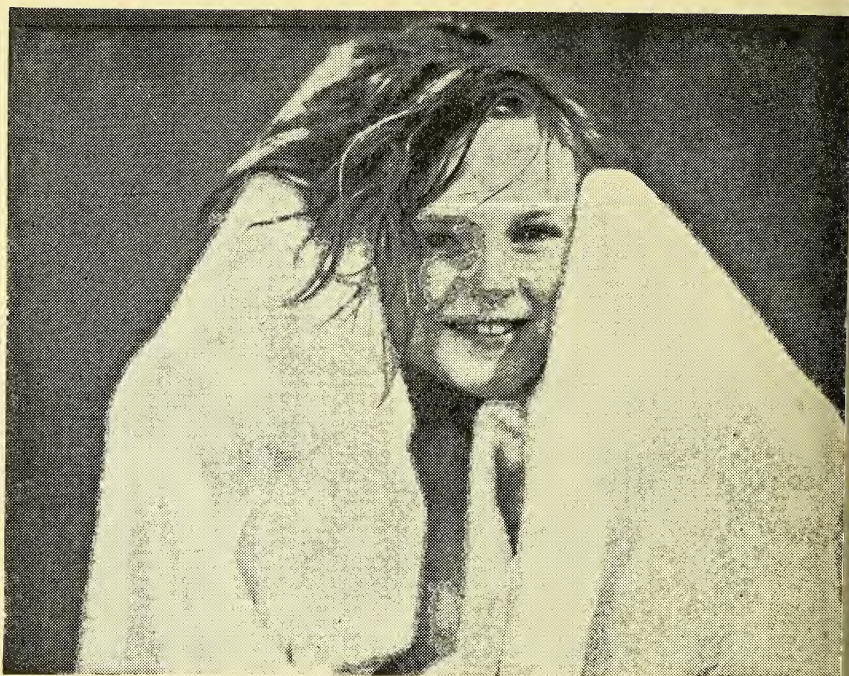
'Merthiolate' is noted for its general applicability in clinical antiseptics. The germicidal action of 'Merthiolate' is prompt and its antiseptic effect is well sustained. Tincture 'Merthiolate' is intended for presurgical disinfection of the skin. Solution 'Merthiolate' is stainless, non-irritating and is intended for general clinical use. 'Merthiolate' is also supplied in ointment, cream, jelly and suppository forms.

**P.A.T.A.**

**LILLY AND COMPANY LIMITED**  
**BASINGSTOKE, HANTS**

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Wright's is the rule  
for the Toilet and Nursery.

# WRIGHT'S

## COAL TAR SOAP



WRIGHT, LAYMAN & UMNEY LTD.  
SOUTHWARK · LONDON · S.E.1 · HOP 2315



## The position is that . . . .

The demand for Milton Denture Powder exceeds the supply, and orders are being dealt with in rotation for the 1/3d. size only.

To avoid delays, orders for Milton products, which include Milton Dental Powder, are being split. The other Milton products are being despatched without delay, and the Denture Powder about two or three weeks later. The increased carriage charges, by reason of the two deliveries, are being borne by us.

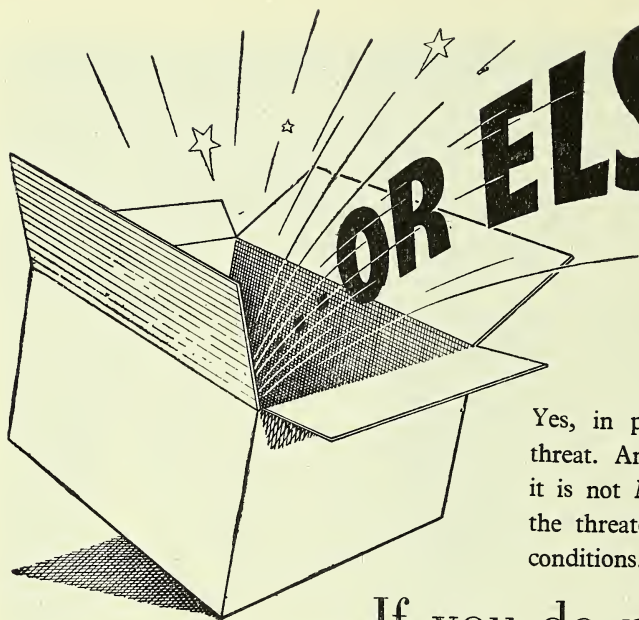
We regret that it will not be possible for us to accept further orders for the 2/2d. size Milton Denture Powder until another announcement is made.

We take the opportunity of thanking chemists for their indulgence, and assure them that the delay is due to causes beyond our control.

**P.A.T.A.**

**MILTON ANTISEPTIC LTD.**

**CHAPEL LANE, SANDS, HIGH WYCOMBE, BUCKS.**



Yes, in plain language this is a threat. And a severe one too. But it is not Macleans who are threatening; it is present day conditions.

If you do not return  
**MACLEANS CARDBOARD CONTAINER**  
 promptly, it will be impossible for  
 further supplies to be guaranteed

1. Fold them flat and tie together with string. (Paper wrapping unnecessary.) Send parcel post. Tuck in flaps where necessary, to keep size within postal regulations. Pack smaller containers inside larger ones. (Four to seven average size containers approximate size allowed.)

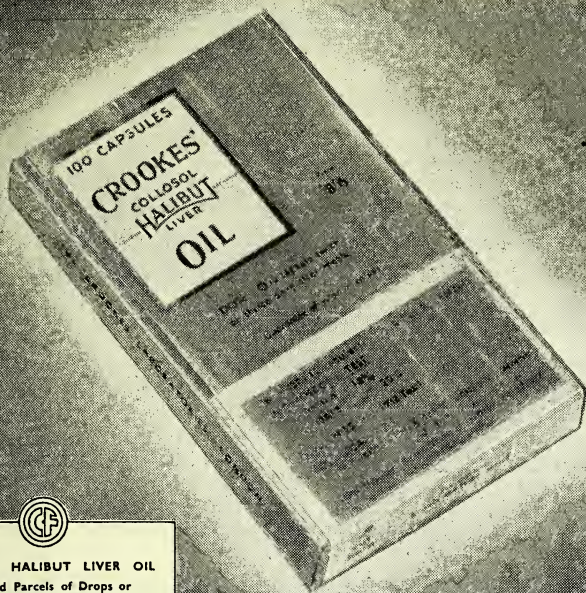
2. Use addressed labels received with invoices. Enter cost of postage on Postal Receipt portion of label (which must be date-stamped by Post Office). Detach this Receipt portion and keep it.

3. Postage will be refunded only by our representative when he calls, on surrender of Receipt. This Receipt cannot be accepted for direct credit, and must not be deducted from account.

**WHY?** Because we simply cannot get the cardboard to make enough new containers. The war has not put an end to the cardboard shortage. On the contrary. More products are manufactured now than during the war and the demand for boxes is greater than ever. Existing containers must be emptied and turned immediately for refilling in order to keep your supply lines open.

*Follow the simple directions opposite*

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Standard Parcels of Drops or  
Capsules only

<b>PARCEL G = 1 DOZEN</b> 12 x 15 c.c. 5/- Drops Less 25%	Bonus 1	Sell 5/-	4 1 4 3 0 0 15 -0 2 5 0 4 6 *£2 0 6
.. 10%			
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.. 10%			
*Amount of cash with order			
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.. 10%			
*Amount of cash with order			
<b>PARCEL M = 3 DOZEN</b> 36 x 100 Capsules Less 25%	3	8/6	15 6 0 3 16 6 11 9 6 1 13 0 *£10 4 6
.. 10%			
*Amount of cash with order			

## The NEW Packing

Designed originally to overcome wartime manufacturing and transport difficulties, this new pack has emerged as one that looks really well on the counter (an important sales-building factor) and is handy for the pocket and handbag.

This new pack is now included in our 'L' and 'M' bonus parcels only, but it will become increasingly general as existing stocks of the old packing are consumed.

# Crookes' Halibut Oil

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Prepared under ideal conditions which ensure the utmost possible degree of chemical purity.



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INULIN · GALACTOSE  
LACTOSE · MALTOSE  
DEXTRINE (Precip. Starch Free)  
DEXTROSE (Cryst. Anhydrous)  
MANNITOL · RAFFINOSE  
SACCHAROSE · SORBITOL

Thomas Kerfoot & Co. Ltd., Vale of Bardsley, Lancashire

PROMOTES DEEP  
REFRESHING  
SLEEP

*Cadbury's*  
**BOURN-VITA**  
**NEEDS NO SUGAR**

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15/9 per dozen  
less 10% and  
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Recommend it  
for all house-  
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*creates its own demand!*

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**SEROCALCIN PREVENTS COLDS**

HARWOODS LABORATORIES LTD., WATFORD, HERTS.

WATFORD 4457

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25 Tablets 1s.

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FOR FEMININE

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STOPS**

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**P.A.T.A.**

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PROFIT ON:—

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Eucryl Tooth Paste has an increasing Sale.

**EUCRYL LTD.**  
**SOUTHAMPTON**

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*Dental Salt*



Supplies are still difficult, but waxed carton  
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Tax.

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to us stating wholesaler preferred.

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EASTBOURNE.

40.111

TO CHEMISTS  
WHO STOCK



**BABY PRODUCTS,  
AND  
TEK TOOTH BRUSHES**

★ Our representative will be calling on you soon. Please wait until you have seen him, and do not post your orders for our baby products, including powder and soap, and Tek tooth brushes. The full allocation due to you during the current rationing period will be sent to you after our representative has called.

★ Pharmacists upon whom our representative cannot call with any regularity are asked to apply by letter for their quota, which in any case will be reserved for them for a reasonable period after it becomes available.

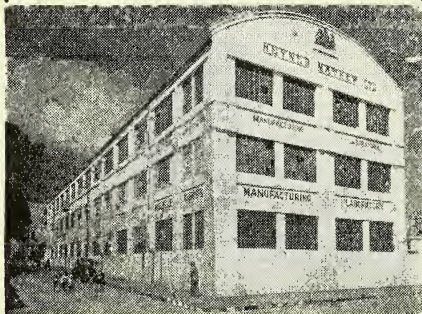
*Johnson & Johnson*  
(GT BRITAIN) LIMITED

REGISTERED OFFICE  
& SALES DEPARTMENT  
SLOUGH . BUCKS



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ESTABLISHED 1836



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**BRITISH MANUFACTURERS  
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LIMITED  
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HEYNES MATHEW LTD.  
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*Manufacturing Chemists—Pill and Tablet Specialists*

## FOR HEALTH and HYGIENE in the HOME

Boon Products are the result of scientific research which led to the discovery of Antiseptics possessing higher germicidal power than those previously available. Moreover, these new Antiseptics are incorporated in bases which enhance their healing and disinfecting efficiency.

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4 oz. bottles. The Antiseptic that Cleanses.

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2 oz. jars. Powerfully Antiseptic, non-greasy, protective and curative.

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4 oz. bottles. Powerfully Antiseptic, cleansing, soothing and protective.

*Terms from S. MAW, SON AND SONS LTD.,  
ALDERSGATE HOUSE, NEW BARNET, HERTS.*

**Made by: P. A. C. CHEMICALS LTD., EPSOM, SURREY**

# Dr. White's

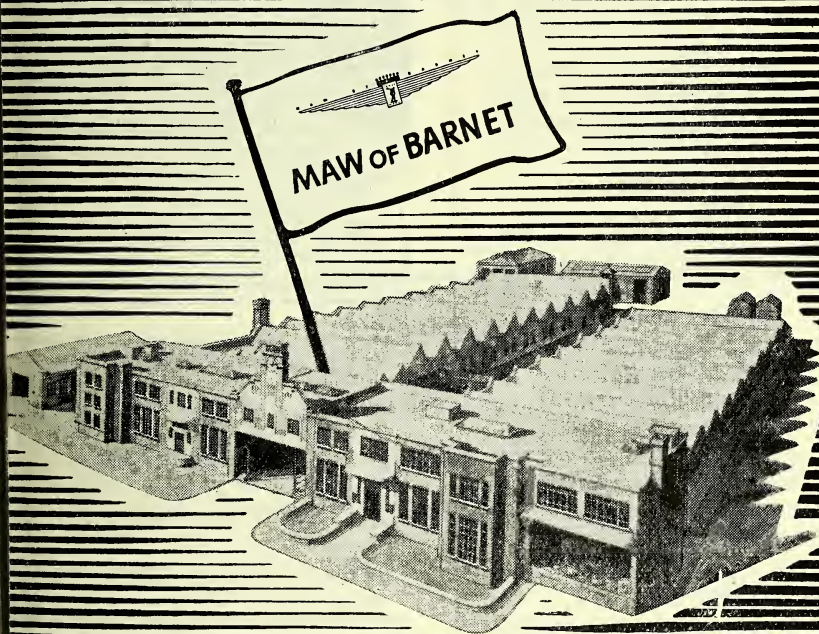
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Made by Specialists  
in  
Surgical Dressings

**ARTHUR BERTON LTD**  
250/260 Old St., London, E.C.



# *The House of Maw*



*Best possible service  
under present conditions!*

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# 'SURE SHIELD'



## Products

Due to shortage of supplies, combined with the curtailment of our staff, we wish to assure our many trade friends that we are using every effort to maintain an equitable distribution of our Products.

### Please Note

- 1st. All Orders are forwarded in strict rotation, and we are now 15 weeks behindhand in delivery.
- 2nd. Due to the position, all additions can only be treated as separate orders.
- 3rd. When writing with reference to an order on hand, please give *exact date* when sent on.

### "SURE SHIELD"

Registered Trade Mark

IODISED THROAT TABLETS  
FRUIT LAXATIVES  
GLYCERINE OF THYMOL  
PASTILLES

PASTILLES      LOZENGES  
TABLETS

**Thos. Guest & Co. Ltd.** *Manufacturing Chemists*  
Carruthers Street, Manchester, 4



the Silver Polish which ensure regular and discriminating customers, to whom your other wares will also appeal.

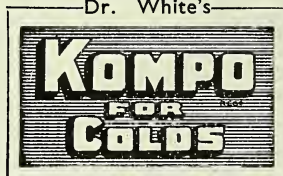
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THE ORIGINAL

### **WIDOW WELCH'S FEMALE PILLS**

9d. BOX PROFIT by ordering 1 dozen 2/10 size. Bonus box given on every dozen (13). It pays to push this size.

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AVAILABLE  
FOR  
IMMEDIATE  
DELIVERY

**IT'S A TONIC FOR  
CUSTOMERS & SALES**

**28<sup>0</sup>/** TO THE TRADE  
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## **• MANOIDS • • NEVROIDS • • CURICURE TABLETS • OCCASIONAL PILLS**

THE ACTON PILL & TABLET Co. Ltd.  
ASH VALE, SURREY.  
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We manufacture . . . every variety of

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We can  
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invite enquiries

for the Manufacturing  
& Wholesale Drug Trade

**The DALES ASPIRIN CO.** (PROPRIETORS)

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## TABLETS

(Indicated in all types of dry cough)

Owing to circumstances beyond our control, we regret that CODOFORME BOTOL has been in short supply, but we are now pleased to advise you that this preparation

**IS AGAIN AVAILABLE  
IN PACKINGS OF 20 AND 250 TABLETS**

If any difficulty is experienced in obtaining supplies through the normal trade channels, you are invited to communicate with us.

**CONTINENTAL LABORATORIES LTD.**  
101 GREAT RUSSELL STREET, LONDON, W.C.1

Telephone: MUSEUM 2042/3

**+ Stops**

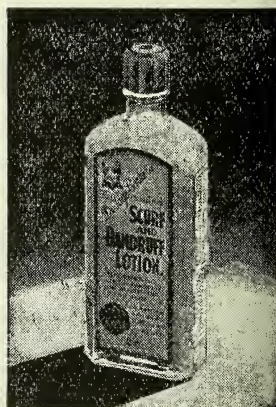
# SCURF

*Dr. Page-Barker's*  
**Scurf & Dandruff Lotion**

If you find any difficulty in obtaining supplies send us the name of your usual Wholesaler and we will do our best to assist you.

*Sole Manufacturers and Proprietors—*

**ILEX SUPPLY CO., LTD. 252b GRAYS INN ROAD, W.C.1**




Trade **18/-** doz.

Plus Tax **ONE SIXTH**

Retail **2/9**



**HOW WELL THEY SELL!**



*Box's Pills*

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A.T.A. retail prices (including P. Tax)  
1/3, 3/-, 4/10½, 12/-, 21/9.

**W. H. BOX**

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**'HUFFS'**

THE GERM KILLING THROAT TABLETS  
AGAIN EXTENSIVELY  
ADVERTISED THROUGHOUT  
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**ORDER NOW!**

RETAIL 1/3 Including Tax  
COST: 1 to 3 doz. 11/1  
per doz.; 6 lots 9/11  
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Lots 9/4 per doz.

All including  
Purchase Tax

BONUS: 13 to Doz.  
6 doz. and over.  
3 doz.  
and over  
carriage  
paid.



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**HOUGH, ROSEASON & CO., LTD., MANCHESTER**  
MEMBERS OF THE P.A.T.A.

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**FOR OVER SIXTY YEARS**

**THOMAS WAIDE & SONS, LTD.**  
**KIRKSTALL HILL**  
**LEEDS**



## IF YOU'RE OUT OF ONE RECOMMEND THE OTHER



In these days, when, do what we will, we cannot always cope with demand, there is an added advantage in the two Parminths.

At the moment the ready for the Parmint Syrup is in short supply. If you are temporarily out of stock, recommend your customers to take a bottle of the Parmint Concentrated Essence.

All our press advertising features both Parminths, and mentions their prices.



and

**PATA**

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Sole Manufacturers.

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## "TICK" INSECT POWDER

NATIONALLY ADVERTISED.

EXPORT ENQUIRIES INVITED

Destroys Beetles, Cockroaches, Crickets, Bugs, Ants, etc., etc.

RETAIL 1/3 :: TRADE 10/- per doz.

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P. O. BOX 370

QUOTATIONS WANTED OF ALL  
PHARMACEUTICAL CHEMICALS AND DRUGS

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HOME GROWN DRUGS

# *Digitalis* *Folium*

DIGITALIS PULVERATA

(Biologically Assayed & Adjusted)

Manufactured under strict

scientific control from

leaf grown on our own

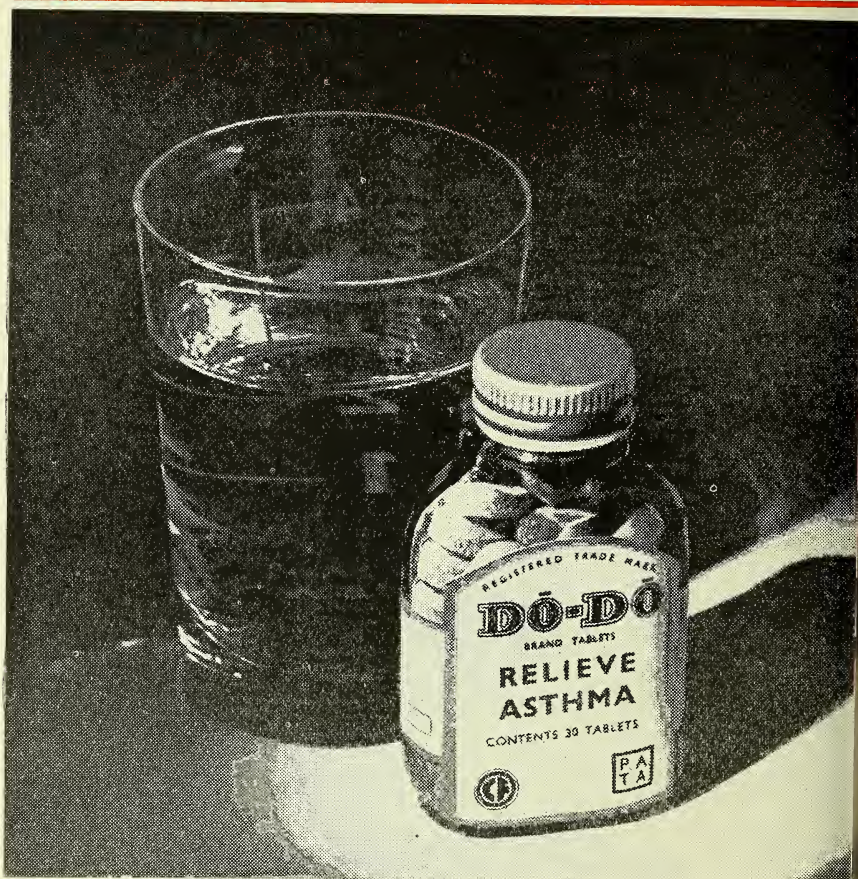
Long Melford farms.



# Stafford Allens

STAFFORD ALLEN & SONS LTD. WHARF RD., LONDON, N.1. Phone: Clerkenwell 1000 (7 lines)





*One DŌ-DŌ checks cough paroxysm*

7 TABLETS 1s. 1½d. · 30 TABLETS 3s. 4½d. · INCLUDING P

*International Laboratories Ltd.*

CHARLBURY

OXFORD

CHARLBURY 29



# PACK IT IN



*because*

Mono cartons and containers are the most compact, convenient and hygienic form of packing for a host of products, including liquids, powders, creams and pastes for use by the Food and allied trades. As a result of wartime experience and experiment many new containers of advanced design and construction will become available.

For the better packing of established products and the marketing of new, we can offer suggestions on shape and styling, or a Mono Container will be specially designed for you.

**MONO CONTAINERS LTD., PARK ROYAL, LONDON, N.W.10**

Telephone : WIllesden 0900 (8 lines)

# STERLING BRAND

Page 441

Chemicals

## IRON AND AMMONIUM CITRATE.

A complex ferric ammonium citrate

**Properties.** Thin dark reddish brown transparent scales, with an astringent taste. Very soluble in water.

**Standard.** The standard grade manufactured for medicinal purposes should comply with the requirements of the British Pharmacopœia in all respects.

**Uses.** Ferric Ammonium Citrate is one of the most widely used and generally prescribed preparations of iron. It is one of the least astringent compounds of iron and for this reason is often favoured. A green variety of ferric ammonium citrate is also used medicinally but is more frequently employed in the preparation of photographic blue print paper.

**Packages.** 28 lb. tins.

**Manufacturers.** THOMAS TYRER & CO. LTD.  
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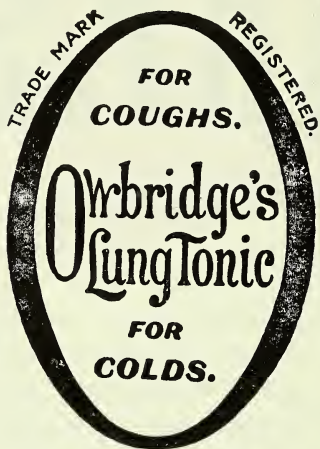
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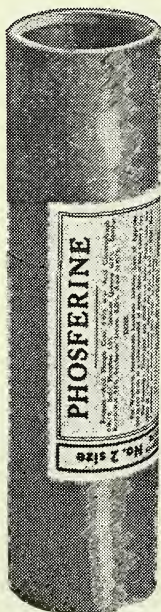
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(T.17.)



P.A.T.

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Laxative Pellets

Meeting the need for something more persuasive than ordinary laxatives "Medilax" is imperative without being discomforting and, unlike drastic purgatives, does not induce a subsequent state of constipation which is often more acute than the first.

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Reliable hypnotic and sedative.  
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An advance in coal tar therapy. Of particular value in eczema in its varied forms. 2-oz. and 16-oz.

### MARTINDALE "STERULES"

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## NEWS OF THE WEEK

**Sweets Ration.**—There is no change in the amount of the ration of chocolate and sweets or in the value of personal points for the ration period No. 2, which began on August 19.

**Exports to Channel Islands.**—The Export Goods (Control) (No. 5) Order, 1945, moved the need for export licences for the Channel Islands for many classes of goods. A new Order (Export of Goods (Control) (No. 6) Order, 1945) further recedes such control and the only goods now subject to Board of Trade licence on export the Channel Islands are fertilisers, arms, ammunition and other military supplies.

**Labelling of Foods.**—Retailers are reminded that after November 1 it will be an offence to sell any prepacked foods which do not comply with the requirements of the Labelling of Food (No. 2) Order, 1944. Accordingly, retailers are urged to turn over their stocks so as to clear, before November 1, all incompletely labelled goods. A guide to the labelling requirements of the various prepacked foods has been published

in the seventh edition of the Ministry of Food retail price list, dated May 28. Free copies of this guide and any further information are obtainable on request from Food Standards and Labelling Division, Norfolk House, Colwyn Bay, Denbighshire. Retailers are reminded that it is an offence under the above Order to display any advertisements (i.e. showcard, poster or leaflet) which states that a food contains vitamins or minerals, unless in the advertisement or on the wrapper in which the food is packed there is a declaration of the amount of each vitamin or mineral claimed to be present.

**Research Station Site.**—Part of the Munden estate, Watford, has been acquired for a centralised research station for the Department of Scientific and Industrial Research.

**Plymouth Soap Shortage.**—It is reported from Plymouth that toilet soap is practically unobtainable from chemists in the city. The situation as to household soap, soap powder and soap flakes is even worse.

**Beeswax Trade Meeting.**—A meeting of the beeswax trade will be held at the rooms of the Rubber Growers' Association, 19 Fenchurch Street, London, E.C.3, on September 4, at 3 p.m., for the purpose of discussing the division of the pool arising from exports of Ministry stocks of beeswax.

**Penicillin for Duke of Gloucester.**—The Duke of Gloucester, Governor General of Australia, who is on a tour of Queensland, was stated on August 13 to be receiving penicillin treatment for his leg, which he injured recently when out riding. It was stated that his condition was improving.

**Scottish Chemists' VJ-Day.**—Chemists and druggists in Scotland generally closed down for two days' VJ holidays, as suggested by the Government and by local organisations, but made adequate provision for the service of urgently-needed medicines as well as remaining open for a given period each day. The arrangements are reported to have worked smoothly.

**Resumption of Whaling Recommended.**—Preparations to resume the whaling industry, to increase the world's food stocks, is urged in a report of the Whaler Section of the Chamber of Shipping of the United Kingdom. It is stated that the pre-war annual production of whale oil averaged 480,000 tons, more than 90 per cent. of which came from the Antarctic, but expeditions were subject to restrictions, so that figure did not represent full capacity. It is suggested that the world requires a smaller number of floating factories than the pre-war number, and that about twenty would be sufficient, nine of which should be British.

**Argentine-British Medical Centre.**—An Argentine-British Medical Centre has been established in Buenos Aires, with the assistance of the British Council. Its purpose is to promote closer relations, and facilitate the exchange of information, between the British and Argentine medical professions. The Centre has a Committee of Honour, with twenty-two Argentinian members. British representatives of various branches of medicine have been invited to join the Committee. On the executive committee are the Centre's president, director, secretary, an assistant secretary, three ordinary members, and two representatives of the British Hospital in Buenos Aires. The Centre's library contains a selection of the most important British medical journals and textbooks. When an inquiry cannot be answered on the spot, the Centre obtains—through the British Council—informa-

tion, articles and books (or photostatic copies) from Britain. At the recent inauguration ceremony those present included Sir David Kelly (British Ambassador to Argentina), Sir Eugen Millington-Drayton (British Council's chief representative in Spanish-speaking America), and Prof. Dr. José Arce (Dean of the Faculty of Medical Sciences, Buenos Aires). A British Council film, "Surgery in Chest Disease" (Spanish version), was much appreciated by the audience. There were exhibitions of photographs and medical publications.

#### **Consumption of Invert Sugar in Eire**

The Department of Supplies in Dublin has drawn the attention of the Irish Drug Association to the fact that invert sugar has been diverted to irregular uses. In view of this the Association has addressed the following letter to all I.D.A. members: "special allocation of sugar has been made available for the manufacture of medicinal preparations, and the Department proposes to take any steps that may be necessary to ensure that it is sold only to persons who are in genuine need of it for medicinal purposes. Accordingly a conference between officers of the Department and representatives of the retail and wholesale sections of the Association took place recently where the matter was fully discussed. It was agreed that the Association should circularise all members, requesting them to exercise every care with a view to ensuring that invert sugar syrup is supplied only to persons genuinely in need of it for medicinal purposes, and that only the genuine requirements of such persons are met. It was also agreed that wholesale suppliers will in future keep such records of their sales of invert sugar as will bring to light purchases of excessive quantities of that commodity. It was further agreed that wholesale suppliers will bring to the notice of the Association cases in which they consider that quantities of syrup have been purchased by individual retailers in excess of what might reasonably be required for purely medicinal purposes. The Association will investigate these cases and report the results to the Department on being satisfied that there has been a diversion of invert sugar to irregular uses. It was readily admitted at the recent discussion that the vast majority of retail chemists have in no way contributed towards the irregular use referred to above. Nevertheless, in view of what has been stated it is imperative that every member should take all reasonable steps to satisfy himself that sales of invert sugar are solely for medicinal purposes."



## LEGAL REPORTS

**In Possession of Opium Utensils.**—At Birkenhead, recently, Fan Tim, a Chinese seaman, was fined £10, with £1 1s. costs, for being in possession of utensils for smoking opium, and a further £10, with £1 1s. costs, for having in his possession uncut and prepared opium.

**No Convictions in Spirit Charges.**—In charges brought at Glasgow sheriff court, recently, of receiving, removing and selling ethylated spirit without authority, a verdict of not proven was recorded against the defendant, and of not guilty against two other defendants.

**Spirit Offences.**—James Robinson, Ph.C., of Donegall Street, Belfast, was fined a total of £9 at Belfast summons court on August 8 on pleading guilty to selling ethylated spirits to a person whom he did not know; failing to keep a record of the sale; and not having the name and address of the seller on the bottle.

**Excessive Price Alleged.**—At Blackburn, on August 9, Richard Ludwig Brunt, Park Road, was fined £5 on each of two charges, and costs amounting to £11, for offering air grips at an excessive price. It was stated that on two occasions Brunt charged 11d. per gross for a quantity of 25 gross, against a maximum price of 1s. 2d., while on two advertisements the advertised price was 7s. 6d. per gross. Notice of appeal was given.

**Alleged Bribe to Police Officer.**—Allegations of attempted bribery of a police officer were made at Clerkenwell, London, on August 6, when Leslie Lazarus Webber, described as a chemist, 11 Warwick Avenue, Finsbury, and Albert Angel, 14 Harrington Square, London, N.W.1, were charged with giving, on or about July 16, seventeen mattress covers and four pillow slips, the property of the Ministry of Works. A detective-sergeant said he went to a chemist shop at 3 Millbrook Place, N.W.1, and told Webber, who was the manager, that he was making inquiries about the property. Webber said: "Can you forget about it if I give you £10, as I have only just qualified as a chemist?" Webber said he had got the £10 from a man he had only seen once before. At the police station he admitted that he knew the man, and that he was Albert Angel, a barber. Although they had pleaded not guilty, the magistrate said the charge had been proved. The charge against Webber, who had lost his job, was dismissed and payment of £10 10s. costs. Angel, who

had one previous conviction for landing in this country without permission, was fined £10 or one month's imprisonment.

**An Unauthorised Seller of Poison.**—At the Nelson (Lancashire) magistrates' court on August 11, Alfred Hanslip, 3 Hill Street, Colne, was fined £2 for that he, not being an authorised seller of poisons, sold by retail ephedrine, which was contained in a preparation known as Anestan tablets. He was fined £2 for not labelling the tablets with the name and address of the seller. Mr. Sydney Haworth, prosecuting for the Pharmaceutical Society of Great Britain, said that in order to sell poisons a person must be a registered chemist. The tablets known as Anestan contained poison. Miss Mary Josephine Billington, an agent of the Society, purchased a bottle containing the tablets from defendant's stall in the Nelson market, being served by Mrs. Hanslip. In evidence, Miss Billington said the bottle of tablets was taken from a shelf on the stall, and it was quite open to the public view. For the defence, Mr. H. Wilkinson said that Mr. Hanslip was on holiday at Blackpool ten days before the offence was committed and privately bought two bottles of the tablets from a man who recommended them. His wife suffered from hay fever, and they were for her use. He sent them on to the Nelson stall for her, when an attack came on, and an assistant accidentally placed them in the position in which they were found. They were definitely not for sale to the public.

## INQUESTS

**Luminal Poisoning.**—A verdict that she took her life while the balance of her mind was disturbed was returned at Brighton, recently, on Mrs. M. M. Tomlin, who was admitted to the Royal Sussex County Hospital after taking 150 Luminal tablets; she died some days later.

**Doctor's Action Questioned.**—In returning, at Hampstead, recently, a verdict that Mrs. M. McFarlane took her life while of unsound mind, the coroner declared that he was not at all happy about a prescription for 100  $\frac{1}{2}$ -grain tablets of Luminal by a doctor to whom the patient had been referred by a Wimpole Street specialist. The coroner expressed the opinion that the drug was not safe, and should always be used "in limitation." The doctor stated that he had previously received the case history from an eminent psycho-analyst.

## WORK OF WOMEN IN FACTORIES

REPORT No. 88 by the Industrial Health Research Board of the Medical Research Council comprises "A Study of Women on War Work in Four Factories." An earlier inquiry discussed sickness absence among women in industry and analysed, from the standpoints of type, frequency and amount of absence, the sickness records of 1,000 women, selected at random. In the present inquiry 100 women, from four factories of the previous random samples, were interviewed. Each group of 100 consisted of the fifty who had had the most frequent and lengthy periods of sickness absence during the last six months of 1942, and the fifty who had had the least sickness absence in the same period. Each interview lasted from thirty to sixty minutes, was conducted in a room set aside for the purpose, and was preceded by an explanation of the aims of the interview, its confidential aspect being emphasised.

### Subjects of the Inquiry

The matters inquired into included environmental factors, personal relations, method and amount of payment, pace of work, hours of work, including shift systems, night work, and mental attitude to the job in hand, as well as the external factors of transport, recreation and background of home and health. The general conclusion of the Board was that the women now employed in industry, though varying considerably in background, social status and previous experience, had settled down remarkably well to factory life. On the whole, they were fairly satisfied with their jobs and with working conditions, and there were few general complaints, worries and difficulties being usually local or individual and connected with specific factory conditions. They were less numerous and less disturbing than worries associated with home life. The attitude of the women to specific points are summarised below:—

(a) Unsuitable atmospheric conditions, especially on the night shift, were a frequent cause of discomfort and probably of reduced efficiency.

(b) Relations with other workers were satisfactory, but contacts with supervisors and still more with shop managers were often remote or non-existent.

(c) A large majority (over three-quarters) of the women were satisfied with the amount of payment and a somewhat smaller proportion with piece-work prices.

(d) With the pace of work only 8.8 per cent. of the women were dissatisfied.

(e) Approximately 50 per cent. of the women were employed on a three-shift system, with weekly change of shift. The majority appeared to be content with the arrangement, and of the three shifts the morning shift was by far the most popular and the night shift the least. A rule women preferred to begin the day in the factory and have the latter part of the day free.

(f) About one-third of the women liked night work, mainly because of the comparative absence of distracting and disturbing influences, and the great opportunity given by their daylight leisure to follow their own bent. There was some evidence that night work was associated with loss of appetite and digestive trouble.

(g) Satisfaction with the work was more usual among women formerly employed in the factory or in the home, and among volunteers rather than conscripts. Older women tended to be more satisfied than younger, and married women more than single.

(h) The majority of women were able to complete their journey to the factory in thirty minutes or less, the number taking over one hour being about 7 per cent. There were few complaints about transport services.

(i) Approximately half the women were satisfied with the time available for recreation, although some women found they had enough time but not enough energy or inclination to enjoy their leisure.

(j) Only a small minority of the women seemed to be overburdened with practical domestic problems, but a larger number complained of household difficulties.

(k) Nearly 60 per cent. of the women claimed to have had good health before entering the factory, and 46 per cent. alleged that factory work was the cause of impaired health. The poorest health histories were shown by the young married and older single women.

(l) Sickness absence was more prevalent among married women, especially those under thirty-five years of age, than among single women. It was often associated with home duties, lack of daylight sleep when on the night shift, and personal worries.



## TOPICAL REFLECTIONS

### Science in the War

Your brief editorial note on the end of the war (p. 171) emboldens me to add a comment on the contribution of science to victory. That contribution cannot yet be measured: perhaps it will never be measured in full. The "high lights" of the record are to be found in radar, in the neutralising of the magnetic mine, and in the atomic bomb; but we have read enough during the past six years to realise that a vast volume of research, directed to a common end, has been carried out on many subjects. The annual exhibits arranged by the Royal Society before the war gave ample evidence of brilliant talent, and sometimes of genius, available in time of need; in 1936, for instance (*C. & D.*, 1936. I. 649), experiments with neutrons showed that the structure of the atom was becoming better understood. Writing to *The Times* a few days before the Japanese announcement of surrender, the president of the Royal Society (Sir Henry Dale) claimed for scientists a right to be heard in discussions on the future of mankind. Two sentences in his letter give appropriate emphasis to this claim. "We [scientists] have tolerated much, and would tolerate anything, to ensure the victory for freedom; but when the victory has been won we shall want the freedom." "The true spirit of science working in freedom, seeking the truth only and fearing only falsehood and concealment, offers its lofty and austere contribution to man's moral equipment, which the world cannot afford to lose or to diminish." I may perhaps be permitted to emphasise the word "austere" in the second quotation. Scientific truth, often won at great cost, is austere: we shall do well to remember this.

### Unanswerable

No better case has ever been put before a ministry, I think, than that of the Central Pharmaceutical War Committee recorded in your last week's issue (pp. 171, 174). It embodies sufficient facts to render any body other than a hidebound group of bureaucrats amenable to argument. The need for ophthalmic surgery in some government departments is increasingly clear. The published correspondence referred to leaves us uncertain whether anything beyond a verbal refusal to reconsider the case for pharmacy has been received. Possibly not, the case being for ordinary readers unanswerable. In a long experience

I have noticed that when an obstinate institution has a weak defence for its course of action it falls back on the formula: "We always do so-and-so." That is probably what has happened in this case. The formula lends an air of inscrutability to the defence; and few of us are able, as a negro announcer put it, "to unscrew the inscrutable." The present vogue for tablet medication may have been a factor in determining this official attitude: one can imagine an adviser in Whitehall saying, "An epidemic? Stuff and nonsense! Let the doctors leave a few tablets wherever they call." Such a policy, cynically devised and ruthlessly practised, would cheapen medicine—in more senses than one.

### Daniel Turner as Physician

Information in books of reference about Daniel Turner (1667-1741), the originator of the calamine cerate which in a modified form became an official unguentum calamine, is supplemented in a well-written article, signed "S. M.," appearing in *The Gentleman's Magazine* for August 1845. Though Turner of the cerate is remembered as a surgeon who became a physician and as a keen critic of Thomas Dover and Joshua Ward, his career, except for this overlooked or disregarded account, has been involved in considerable obscurity. It appears that during the latter part of his life he was in request as a consulting physician, a fact that provided "S. M." with some lively anecdotes. While Turner was attending a patient who was seriously ill, another physician was "called in upon him." The two disagreeing as to the advisability of prescribing oxymel of squill, a third physician was summoned. He turned out to be "a grave old gentleman" who, notwithstanding age and gravity, was in full possession of his wits; for on the objection being stated he replied, "Pray, Sir, no more fiddle-faddle; if you can tell us, upon your own trial, of a better remedy than the oxymel upon this occasion, let us have it." So the oxymel was ordered, and presumably the patient or the patient's executors paid the fees cheerfully. A similar dispute arose between Turner and one of his colleagues on the relative merits of serpentry and saffron as a "cardiac and alexipharmic"; the outcome was that saffron was administered in 10-grain doses every four hours. From this type of prescribing to injections of histamine phosphate is a long step.

**Xrayser**

## COMPANY NEWS

HOPKINSON & HAYDEN, LTD. (P.C.).—Capital £3,000. Chemists, druggists, etc. E. Hopkinson, M.P.S., and D. G. Hayden, M.P.S., directors. R.O.: 105 Bridge Road, Oulton Broad, Suffolk.

BRITISH CHEMICAL PRODUCTS & COLOURS, LTD. (P.C.).—Capital £1,000. Manufacturing, analytical and dispensing chemists, etc. Dorothy Miller is the first director. R.O.: 6 Broad Street Place, London, E.C.2.

SKELWITH, LTD. (P.C.).—Capital £500. Consultants and research workers in metallurgy; pharmacy and agriculture; chemists, etc. Brian Reed, consulting engineer, director. R.O.: 316 Carr Road, Northolt, Middlesex.

R. MILLNER (CHEMISTS' SUNDRIES), LTD. (P.C.).—Capital £4,000. To acquire the business of a chemists' sundries merchant carried on at 486 Stretford Road, Manchester. Ralph and Mrs. Emily Millner, directors.

HARGREAVES & SONS (MINERAL WATERS), LTD. (P.C.).—Capital £2,000. Manufacturers of and dealers in mineral waters, etc. Harry C. and Clifford H. Hargreaves, directors. R.O.: Princess Street, Llanelli, Carmarthen.

G. & E. BABEY, LTD. (P.C.).—Capital £2,000. To acquire a business of creosote manufacturers and merchants carried on at Totton, Hants. George and Edward Babey, Glendale, Rumbridge Street, Totton, Southampton, directors.

A. J. SIRIS PRODUCTS, LTD. (P.C.).—Capital £5,000. Manufacturers of and dealers in perfumes, essences, creams, powders, soaps, cosmetics, etc. Directors to be appointed. R.O.: 49 Queen Victoria Street, London, E.C.4.

C. L. HIGHFIELD, LTD. (P.C.).—Capital £5,000. To acquire the business of a chemist and druggist lately carried on at 4 Sunbury Road, Birmingham. Charles L. Highfield, M.P.S., and Phyllis Highfield, directors. R.O.: 431 Bearwood Road, Smethwick.

BETTABRUSHES, LTD. (P.C.).—Capital £1,000. Manufacturers of and dealers in brushes, cleansing substances and appliances, etc. Lewis R. C. Ching and Thomas H. Patterson, directors. R.O.: Bettabrush Works, Whitstable Road, Faversham, Kent.

IAN SUPPLIES (LONDON), LTD. (P.C.).—Capital £100. Wholesale or retail manufacturing, pharmaceutical and general chemists, herbalists, drug merchants, etc. Vera J.

Golendziner and Rita L. Jacobs, director. R.O.: 332 Kennington Road, London S.E.11.

HOLMES PHARMACIES, LTD. (P.C.).—Capital £1,500. To acquire the business of a pharmacist carried on by J. A. Balmfo at 43 Tontine Street, Folkestone, and carry on the business of ophthalmic and general chemists, etc. Lawrence W. Holm and John A. Holmes, directors.

GLANUX CO., LTD. (P.C.).—Capital £1,000. To acquire the business of a manufacturer and dealer in veterinary medicine carried on by H. C. Chappell as the Glanux Co. (transferred to him from Mr. E. G. Baker under an agreement). Harry Chappell, M.P.S., and Mrs. Alice M. Chappell, both of the Pharmacy, Croft Road, Crowborough, directors.

MR. TOM CHILTON has applied for a licence to carry on at 3 Derby Road, Huyton near Liverpool, a retail business in the undermentioned description of goods on the grounds that such goods were supplied by Mr. James Gregory at those premises from December 1, 1940, to October 23, 1941 and since. Photographic goods and accessories, including cameras and projection apparatus, drugs, medicines, medical and surgical appliances, toilet goods, toilet preparations and perfumery.

INTENDED DIVIDEND.—Ronald Cecil Stableford, M.P.S., 3 Harrington Parade, High Road, Leytonstone, E.11, Essex, Trustee, Mr. L. A. West, Bankruptcy Buildings, Carey Street, London, W.C.2. Last day for receiving proofs, August 29.

ORDER OF DISCHARGE.—Under the Liabilities (War-time Adjustment) Act 1941 and 1944, William James Davison trading as "Gags Fizzan Co.," wholesaler and manufacturing chemists, 13 Charlotte Square, Rhiwbina, nr. Cardiff, was awarded an Order of Discharge on July 30.

APPOINTMENT OF TRUSTEE.—Mr. A. Attwood, 90 Queen Street, Cheapside, London, E.C.4, has been appointed trustee for Cyril Wilson, 3 Church Street, Twickenham, Middlesex, and E. L. Lucas, The Wilderness, West Hyde, Rickmansworth, chemical manufacturers, lately carrying business as the Middlesex Chemical Co. 6 Ye Corner, Chalk Hill, Oxhey, and Rigg House, 14A High Street, Watford, Hertfordshire.



## TRADE NOTES

**Chemicals for Holland.**—Drogimex, Amsterdam, are seeking quotations for pharmaceutical chemicals and drugs. Details in this issue.

**Five-day Week.**—Solport Bros., Ltd., 84-92 Goswell Road, London, E.C.1, are adopting the five-day week. They will be open from Monday to Friday inclusive.

**Examination for Opticians.**—The National Association of Opticians, 130 Princes Road, Liverpool, 3, notify the next examination will be held in December. Syllabus and entrance forms are now available.

**Prompt Delivery Offered.**—Monsanto Chemicals, Ltd., Victoria House, Victoria Street, London, S.W.1, announce that ample supplies are now available for prompt delivery of Monsanto brand methyl salicylate.

**Training in Pharmacy.**—Liverpool School of Pharmacy, 2 Blackburne Place, Liverpool, 8, announce that courses for the Intermediate and Qualifying Examinations will commence at the end of September. Details from the Principal.

**Modern Containers.**—Mono Containers, Ltd., Park Royal, London, N.W.10, announce in this issue that as a result of wartime experience and experiment many new containers of advanced design and construction will become available.

**Abridged Price List.**—Brook, Parker & Co., Ltd., Ashfield, Horton Road, Bradford, have issued an abridged price list of drugs, chemicals, pills, tablets and packed goods. A copy will be forwarded on receipt of one penny stamp (Paper Regulations) with application.

**New Type of Antiseptic.**—Flavazole, a new type of antiseptic discovered in the laboratories of Boots Pure Drug Co., Ltd., Nottingham, is a chemical compound containing equimolecular proportions of 2:8-diaminoacridine (proflavine base) and sulphathiazole. Bacteriological results are claimed by the company to have shown that Flavazole is superior to either sulphathiazole, proflavine or mixtures of the two against certain gram-negative bacilli. Compound Flavazole powder sterilised (Flavazole, 2 per cent.; sulphathiazole, 98 per cent.) is issued in cartons of twelve sifter packets, each containing 5 gm.; boxes of 100 sifter packets, each containing 5 gm.; and bottles of 15 gm. Flavazole is issued in bottles of 25 gm. and 100 gm.

## BUSINESS CHANGES

**JOHNSON AGENCIES (PROPRIETARIES), LTD.**, Clarendon Works, Clarendon Road, West Croydon, Surrey, have appointed Mr. Paul E. Catcher as advertising manager.

**MR. SAMUEL SMITH, M.P.S.**, has resigned from the position of managing director of Ascotts Pharmacies (1933), Ltd., and has purchased the two businesses of Mr. T. Kennedy Black at 142 St. John's Wood High Street and 2 Queen's Terrace, London, N.W.8.

**MR. F. W. LANE**, Gurlus Grove, Tintern, Mon., has been appointed the representative in Cardigan, Radnor, Pembroke, Carmarthen, Brecknock, Glamorgan, Monmouth and South Gloucester, excluding the City of Gloucester, of Solport Bros., Ltd., 184-92 Goswell Road, London, E.C.1.

**BICKFORD'S**, The Strand, Exmouth, the proprietor of which is Mr. H. Jarvis Graves, M.P.S., announce the opening of a pharmacy at The Strand, Lympstone. This is contracted with the County Insurance Committee for the dispensing of National Health Insurance prescriptions, and is under the management of Mr. George F. Harry, M.P.S., who has been a sergeant dispenser in the Royal Air Force during the war.

**MESSRS. WANDS, LTD.**, Wandol House, Wellington Street, Leicester, desire to advise the trade that in connexion with the purchase by Timothy Whites & Taylors, Ltd., of eleven of their branches in Leicester (*C. & D.*, July 28, p. 85), that Wands, Ltd., manufacturing chemists, Wandol House, Wellington Street, and Wands, Ltd., dental laboratories, King Richard's Road, Leicester, will continue under the same direction and management as before as manufacturing and dental manufacturing chemists.

## Proprietary Articles Trade Association

**Alterations to Protected List.**—*Harvey & Co. (Dublin) Ltd.* Correction to P.A.T.A. Year Book, page 71. The entry for Harvey's Hair Restorer (Human) should read: 2s., 18s. doz., tax per doz. 18s., i.r.p. 3s. 6d.

*Wm. R. Warner & Co., Ltd.* Agarol Compound. The existing 7½-oz. size has been discontinued. Two sizes will be marketed, i.e. 6 oz. and 14 oz., but owing to the shortage of 6-oz. bottles only the 14-oz. size will be available until December 31. 6 oz., 26s. 8d. doz., tax per doz. one-sixth, i.r.p. 3s. 4d.; 14 oz., 53s. 4d. doz., tax per doz. one-sixth, i.r.p. 6s. 8d.

## PERSONALITIES

MR. G. C. NORTH, M.C., a Principal Assistant Secretary in the Ministry of Health, has been appointed Registrar-General upon the retirement of Sir Sylvanus P. Vivian, C.B., on September 30.

FLIGHT-LIEUT. JOHN SINGER, who before joining the R.A.F. was with Davidson & Kay, chemists, Aberdeen, is now presumed to have lost his life in September 1944, when he was reported missing.

MR. JOHN BOYD, M.P.S., Scottish area director for Boots, has been appointed a director of Boots Pure Drug Co., Ltd., and will take up his duties in September in an office in Edinburgh. Mr. Boyd is well known in Scottish Pharmaceutical circles, being a member of the Pharmaceutical Standing Committee (Scotland) and also of the Pharmaceutical War Emergency Committees.

MR. DUGALD TAYLOR, M.P.S., who has retired from business, has been sixty years in the same premises in Brandon Street, Motherwell. He went there as an assistant to the late Mr. James Martin, who had two shops and transferred the Brandon Street premises to Mr. Taylor fifty-five years ago. He has been session-clerk of Cairns Church, Motherwell, for forty-four years. The business has been acquired by Mr. Robert Cameron, M.P.S., who was an assistant with Mr. Taylor.

## MARRIAGE

MOSS—THOMAS.—At Broomwood Road Methodist Church, Clapham Common, London, S.W., on August 18, Lieutenant John Leonard Mountford Moss, R.A.S.C., son of Mr. J. E. C. Moss (representative of Ayrtton, Saunders & Co., Ltd.) and Mrs. Moss (formerly of London), 35 Regent Road, Rhyl, to Betty Parker, elder daughter of Dr. William Thomas, M.B., B.S., B.Sc., and Mrs. Thomas, 31 Larkhall Rise, Clapham, London, S.W.4.

## DEATHS

BELLAMY.—On August 19, 1945, at Lionmede, Springfield, Chelmsford, Mr. John Tom Bellamy, aged sixty-two.

BURGIN.—At Aplin's Close, Harpenden, Herts, on August 16, the Rt. Hon. Leslie Burgin, LL.D., aged fifty-eight. Mr. Burgin was Minister of Supply, 1939-40. From 1932-37 he was Parliamentary Secretary to the Board of Trade.

HESELTON.—On August 17, at East Rudham, King's Lynn, Mr. Charles James Heselton, M.P.S., in his eighty-first year. After qualifying in Ireland in 1887, and this country in 1892, Mr. Heselton gained his early experience with Messrs. Haye Cunningham & Robinson, Ltd., Burroughs Wellcome & Co., John Wyeth & Bros., Ltd. Dolbear & Goodall, Oxford, and on the French Riviera. In 1895 he joined John Richardson & Co., Leicester, Ltd., as south coast representative, transferring to the northern and Scottish area in 1904, and ultimately became general manager. Upon his retirement in 1930 the deceased purchased the old pharmacy at East Rudham. He is survived by his second wife, daughter and son, Mr. Geoffrey G. Heselton (Wigglesworth, Ltd.).

MAINPRIZE.—On August 11, Mr. John William Mainprize, 5 Fern Bank, Otley, Yorks, aged seventy-two. Mr. Mainprize was in business in Otley for many years.

## WILLS

FLYING-OFFICER DAVID CLIFFORD DAVIES, R.A.F., M.P.S., Regarth Avenue, Romford, left £751.

MR. JAMES EDWARD HENRY WATSON, M.P.S., 43 King Street, Norwich, left £3,125, with net personality £1,153.

MR. HARRY TALBOT COOPER, M.P.S., High Street, Upton-on-Severn, Worcester, left £17,188, with net personality £15,080.

MR. ROBERT RICHARD GANT, M.P.S., Bushey Pharmacy, Villiers Road, Oxhey, Watford, Herts, left £2,114, with net personality £1,835.

SIR WILLIAM NAPIER SHAW, Sc.D., F.R.S., meteorologist, a former director of the Meteorological Office, left £33,006, with net personality £30,762.

MR. ARCHIBALD CHARLES PYECROFT, M.P.S., 34 Park Crescent, Undercliffe, Bradford, Yorks (Wilman, chemist, Westgate Bradford), left £11,116, with net personality £3,988.

SIR ARTHUR STANLEY WOODWARD, C.M.G., C.B.E., M.D., F.R.C.P.; M.R.C.S., a former Master of the Society of Apothecaries of London, left £124,285, with net personality £108,387.

MAJOR GERALD LESLIE ASHBURNER, FRANCE, Tiptoe, Duddo, Cornhill-on-Tweed, a director of Scott & Turner, Ltd., Newcastle, left £163,709, with net personality £155,279.



## CANADIAN NOTES

**Canadian Chemical Exports.**—Exports of chemicals from Canada during January–September 1944 were valued at \$72,237,000.

**A Vitamin Restriction Lifted.**—The Canadian Department of Munitions and Supply has removed all chemical control restrictions on the use of ascorbic acid.

**Full Canadian Production.**—With the closing of a new plant at Cote de Liesse Road, Montreal, Abbott Laboratories, Ltd., will be in a position to produce in Canada medical and surgical supplies made by the company and sold in the Dominion. At the moment the company produces, at its Montreal plant, only about 86 per cent. of the supplies sold in Canada, the rest being imported from the parent plant in Chicago.

**Convention Postponed.**—Bowling to an appeal from the Canadian Government that the conventions arranged for the period June 20 and July 20 should be cancelled or postponed to leave the railways free to handle traffic of returned Forces, the Ontario Retail Druggists' Association postponed what was to have been its first two-day conference for many years. The conference is now tentatively fixed for September 4 and 5.

**Health Insurance in Operation in 1946.**—The Canadian Minister of National Health and Welfare has announced that a national health insurance scheme will be put into operation during 1946. It is not known what part pharmacists will play in the arrangements. Local associations throughout the Dominion have been studying the various proposals through committees set up for the purpose, and the British plans for a National Health Service are also being watched. So far, there is little indication of any widespread agreement among pharmacists as to the attitude they should adopt.

**Medical Research on Atomic Energy.**—The president of the National Research Council of Canada announced on August 13 that a special medical committee had been appointed in the Dominion to act as a general directing body on medical research in the field of atomic energy. The government, he said, had taken over all uranium and radium deposits known to exist in Canada. Both Great Britain and Canada would have access to the information relating to the atomic bomb, if they desired it, but Canada's interest was to foster research for its industrial and medical possibilities.

## MEDICAL ABSTRACTS

**Flavazole Under Test.**—Flavazole, a compound in equimolecular proportions of sulphathiazole and proflavin, made by Boots, Ltd., Nottingham, is the subject of a report by McIntosh and others ("Lancet," July 28, p. 97), who state that the preparation is nearly or quite neutral in solution and less irritant than its acridine component. *In vitro* tests show that the combination loses none of the bacteriostatic powers of its components, but is actually more effective against gram-negative bacilli. Diluted to 2 per cent. with sulphathiazole, it is efficacious in controlling mixed infections in wounds, and the mixture may be used as a diluent for penicillin.

**Air Disinfection by Chemical Methods.**—In a commentary on the advances brought about by the war in the treatment and control of respiratory infections, the "British Medical Journal" (June 30, p. 914) suggests that air, like water, can be polluted bacterially as well as chemically, and that in any inhabited indoor environment, respiratory infections may be acquired without direct contact with a human reservoir. Thus, hospitals for infectious diseases, children's wards, schools, barracks, transport vehicles and places of assembly become depôts for the dissemination of air-borne infection, and it is to these focal points of infection that methods of control must be applied if the incidence of respiratory complaints is to be materially reduced. Dust suppression by oiling floors and fabrics, and disinfection of the air by ultraviolet light or special chemical disinfectants in an atomised state, are likely to prove complementary to one another. Field trials of bactericidal mists have been rare, despite a large amount of experimental work both in Britain and in the United States. Reports on the experiments are now beginning to appear, and the records of a series of experiments with propylene glycol are already available. They show that, throughout a period of eighty-one ward weeks, there were thirteen infections in the wards treated and 132 in the controlled wards. During the winter of 1942–43, only three instances of coryza were reported in the treated wards and seventy-nine in the untreated group. It was not found easy to maintain a satisfactory level of triethylene glycol, which was experimented with as an alternative to propylene glycol. Its potency was greater, but it had apparently a narrow range between bactericidal and precipitating concentrations.

# PENICILLIN FOR THE RETAIL PHARMACIST—I

by Reginald J. Jeram

(Senior Pharmacist, St. Mary's Hospital, Portsmouth)

MODERN research has largely revolutionised medical therapy by the discovery and subsequent investigations of penicillin. Since its introduction into medicine, its use has been unavoidably limited owing to the comparatively small amount produced, but much time and thought have been devoted to its manufacture, with the result that the yield at present is sufficient to enable its use in an ever-increasing range. Supplies are controlled by the Ministry of Supply, who distribute to recognised centres, mainly hospitals, where the dispensing is done, and whence the products are issued.

The time, however, does not seem far distant when the retail pharmacist will share the burden placed on such centres. It is the object of these articles to help participating pharmacists, in this great health service to the public, by giving an outline of the subject. It is absolutely necessary for every pharmacist to be clear in his or her mind as to the chemical and physical properties of the drug, for without such knowledge much activity will be lost in the preparations, with disappointing results.

## Properties of Penicillin

The substance as used at present is not a pure product, the penicillin content ranging from 20 to 40 per cent. in different batches. With increased knowledge gained by expert observations during the growth of the mould and the ensuing processes, much better samples are now being produced. The powder, which is extremely soluble in water, has a variable colour, but generally is of a yellowish-brown, the impurities being responsible for such fluctuations. It has been found necessary to place penicillin, among other substances needing strict control, in the Therapeutic Substances Act, to maintain an efficient standardisation. Containers are labelled stating the activity in Oxford units, together with the expiry date. These precautions are necessary, because the substance has variable activity in different batches and is also unstable even when kept dry.

Chemically it is an organic acid, and is presented as the calcium or sodium salt, special care being necessary in the latter case, because the salt is hygroscopic. In aqueous solution, depreciation in activity is hastened considerably, hence such solu-

tions should be freshly made so near possible to the time of administration. The maximum activity is maintained over a limited range of pH values, this being from pH 5.5-7.5, and therefore every effort should be made to establish neutrality in all preparations. The effect of the most common reagents needs careful study, the most important being acids and alkalis, which, unless well controlled, are extremely destructive, as the following example will show. A sample of the barium salt was treated with *N*/10 hydrochloric acid at 0° C. and after three minutes was found to be rendered inactive.

Some mild reagents such as alcohol, ketones, and primary amines are contraindicated, and caution should therefore be taken to avoid alcohol when sterilising syringes to be used for administration. Oxidising agents such as hydrogen peroxide and potassium permanganate are detrimental, but certain reducing agents have little effect.

Heavy metals, especially those of zinc, copper, cadmium, and lead, inactivate the drug when ionised; therefore much care must be taken in the choice of apparatus to be used in dispensing and storage of preparations to avoid contamination, i.e. glass bottles. As may be anticipated from their general properties, enzymes cannot be tolerated in the presence of penicillin. The destructive action of heat is of primary importance, but it will be observed from a later article dealing with the dispensing of penicillin creams that there is a slight tolerance to heat, but only over a short duration. All stocks, whether tablets, ampoules or preparations, should be stored below 50° F., preferably several degrees above freezing, therefore a refrigerator with a thermostatic control is ideal.

## Precautions against Contamination

The action of penicillin is mainly bacteriostatic, although a certain amount of bactericidal action has also been demonstrated, but, in face of the powerful bacteriostatic action, many common air-borne bacteria, together with coliform bacteria, are lethal to the drug, and precautions must be taken to ensure so far as possible that such contamination does not occur.

Having studied the outstanding properties of the drug, due consideration must



be given to the apparatus which will be found necessary to carry out the processes involved in the compounding. After a general survey of the precautions to be taken, it will be found that the two main factors governing the successful dispensing of penicillin preparations are: (a) Complete aseptic procedure from start to finish, and (b) the maintenance of a low storage temperature.

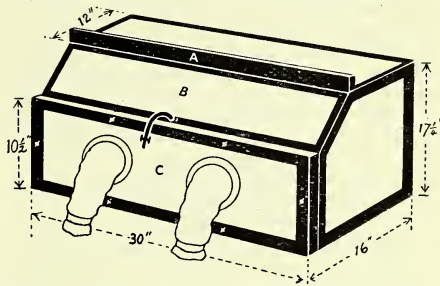
Around these focal points therefore, of necessity, must centre the choice of equipment. The writer, being well acquainted with the limitations of the retail pharmacy, has divided the essential apparatus into two groups, as follows: *Group A*—That which reasonably may be expected to be found in a normal pharmacy. *Group B*—To be found in a much more limited number of establishments.

The former group includes such common apparatus as a mortar and pestle, flasks, funnels, metric measures, rods for stirring, spatulas, watch-glass, hypodermic syringe, needles and beakers. A thermometer registering to 200° C. at least is indispensable for sterilising by dry heat, etc., and could find wide application in general pharmacy. For preference, an all-glass syringe should be chosen, as these are more satisfactory in resisting sterilisation by dry heat. In addition to the usual Bunsen burner, tripod and retort stand, a water-bath and hot-air oven deserve a very prominent position, and both, if necessary, can be made with little difficulty. Tweezers will be found very helpful in conjunction with the watch-glass for counting out tablets, etc.

The second group contains, amongst its members, articles such as an autoclave and refrigerator, which are certainly more expensive. Production of these will improve with time, and in either case only a small expense, as indicated, is necessary. An autoclave is marketed for household preserving at a reasonable cost, which will be found very useful as a pharmaceutical adjunct. In the absence of a refrigerator, other cooling arrangements, such as the ice-box, can be left to the discretion of the pharmacist. A bacterial filter, such as a Seitz or sintered-glass filter with the accompanying Buchner funnel, and inexpensive vacuum pump (for drawing to water supply), are very essential items and repay well for their inclusion. Surgeon's rubber gloves or other suitable rubber gloves are important to guard against infection due to handling, but in their absence the hands must be well scrubbed and disinfected.

### Sterile Dispensing Cabinet

The difficulty of excluding contaminated dusty air and breath led the writer and his assistant pharmacist to devise a dispensing cabinet, which has been in use many months, and was constructed by the joinery staff of St. Mary's Hospital, Portsmouth. As shown in the diagram, it consists mainly of glass (including the base), with a hard-wood framework, which can be replaced by metal



when available. The sloping front (B) acts as a viewing window, the cabinet being externally illuminated by an electric strip light at (A), which has a guard to shield both lamps, and eyes of operator from glare. The front (C) is detachable, and is held in place by six thumbscrews, and is composed of a hinged framework enclosing a length of batiste, rubber sheeting, or similar material. Incorporated into this sheeting are two sleeves of the same material, the open ends being made to contract to wrists by rubber bands. At the centre and bottom of viewing window and in main framework is a brass tube, which passes through to the inside enough to allow rubber tubing to be attached. The outer end has rubber tubing fitted also, together with a screw clamp and wool air-filter. This is used for measuring by suction when a modified pipette is attached to inner tubing. All necessary apparatus, such as tweezers, glass rods, etc., previously sterilised in a wide-mouth jar, and placed inside, are ready for use.

### COMING EVENTS

Sunday, August 26

MANCHESTER PHARMACEUTICAL ASSOCIATION.  
Ramble to Edale, Hucklow and Bamford.  
Meet Central station, 8.40 a.m. Book Bamford return.

Sunday, September 2

MANCHESTER PHARMACEUTICAL ASSOCIATION.  
Holmes Chapel to Alderley. Meet London Road station, 8.30 a.m. Book Holmes Chapel return.

# URANIUM, HEART OF THE ATOMIC BOMB

by Denis I. Duveen, F.R.I.C.

(*Director of Ashe Laboratories, Ltd.*)

THE possible release of the tremendous storehouse of energy which large atoms represent has long been an intriguing field of speculation. Early in 1939 a report was issued of work done by Drs. Hahn, Meitner, and Strassman in Berlin, in which neutrons had been used to liberate energy from the nuclei of uranium atoms. The amount of energy liberated was stated to be 175,000,000 electron volts for each atom of uranium split. These results were considered to be of such tremendous importance that confirmation was immediately sought in several laboratories, notably those of Professor Niels Bohr in Copenhagen, and Professor Enrico Fermi at Columbia University. The original method was inefficient, but the combined pooling of British and American research resources resulted in an improvement of efficiency to which the Japanese would be able to testify—although the last word in efficiency has not yet been reached.

## The Heaviest Element

Uranium occupies a unique position in the periodic table of atomic weights, which starts with the lightest element, hydrogen, of atomic number 1, and ends with uranium of atomic number 92, the last and heaviest element which theory and practice have shown to exist, although short-lived artificial "transuranium" elements have been prepared. The mineral pitchblende has been known for many years; it was in 1789 that Klaproth first called attention to the fact that the ore contained what he was pleased to call "a half metallic substance," which possessed properties quite different from iron, zinc, and tungsten, which had already been isolated and identified. He suggested the name uranium in honour of the planet Uranus, which had just been discovered by Herschel in 1781. No further progress was made, however, until 1841, when Peligot discovered that Klaproth's material was really an oxide of uranium, and he (Peligot) produced the pure metal for the first time.

Uranium and all its compounds are radioactive, and the discovery of this fact in 1896 by Henri Becquerel is of great historic interest, since uranium was the first element found to possess the property of radio-activity, and this led to the search for other radio-active substances, which work was completed by the Curies with their discovery and isolation of radium.

Uranium is not a common element, but is, however, found in quite a number of minerals, most of which are rare. Uranium ores, being radio-active, are usually found in conjunction with radium, in the approximate proportion of one ton of uranium to 320 milligrams of radium. It is, therefore, very much more abundant than radium in the earth's crust. The commonest uranium ores are pitchblende and carnotite. The more important is pitchblende, which is found in a variety of countries, including our own Cornwall, the most important deposits being in Czechoslovakia, Canada and the Belgian Congo. The large deposits in Joachimstal (Czechoslovakia) have been worked since the beginning of the sixteenth century. The extraction of uranium from its ores has been accomplished by many different methods, all of which represent laborious operations, although, owing to its comparative abundance, less tedious than the separation of radium. The salts of uranium were, as we have mentioned, those in which Henri Becquerel first discovered radio-activity; and although it has always presented great theoretical interest owing to its unique position in the periodic table it is only with recent work on the release of atomic energy from it that it has assumed great importance. It is known to exist in no less than eight isotopes, which are incidentally, of interest owing to their frequently having been used for calculating the age of the earth. In the order of decreasing abundance, these are: 238, 235, 234, 234, 237, 235, 233, 236. So far as the information released in the popular Press goes, we are led to believe that it is one of these isotopes, namely, 235, which is used in the atomic bomb. This isotope occurring in but small quantities in the naturally-found uranium, it follows that enormous problems must have attended the preparation of working quantities.

## Few Industrial Uses

Uranium has in the past had but few commercial applications. An impure form of metal, containing some carbide, has been used as a sparking medium in cigarette lighters, although this has been entirely superseded by cerium alloys, which are more highly pyrophoric. In the ceramic industry, uranium compounds have for years been used to give coloured glazes, more especially yellow and orange, to



compounds employed being usually sodium ammonium uranate, which are commonly sold under the name of "uranium yellow,"

little as 0.006 per cent. giving a good yellow colour. Increasing the percentage permits one to vary the colour through range to brown, dark olive green, and finally black. Uranium dioxide has recently been used in conjunction with the powerful incandescent electric lamps in motion-picture projectors, a tiny capsule of  $\text{UO}_2$  being connected in series with the tungsten filament and serving to eliminate sudden surges of current when the powerful lamps are switched on or off, thus extending the life of the lamp considerably.

Uranium salts have also to a limited extent found application as both silk and wool mordants for use in dyeing and to some extent have been used in the calico printing trade. Fritz Haber, in his epochal work on the synthesis of ammonia by the direct union of its elements, found that metallic uranium and uranium carbide were among the best catalysts, although the high initial cost and ease with which they were poisoned mitigated against their large-scale use. In medicine, uranium salts have not found many useful applications. The urate, salicylate, and chloride have been used as remedies for gout and diabetes; the salts of uranium are active poisons, and the use of any of them for pharmaceutical purposes would appear to be fraught with considerable danger.

#### Possible Therapeutic Applications

The technical development which has been made during the work on the disruption of the uranium atom may, however, find of great application in the field of human therapy. This work will undoubtedly lead to the production of many more artificially-created radio-active isotopes of common elements, and these will serve as indicators to increase our knowledge of the path taken by the body by various elements when administered as medicines; good work on these lines has, of course, been accomplished, and new possibilities will be opened up by this technique.

Uranium salts have been used in analysis, nitrate being used as a reagent for phosphates and arsenates, and the acetate in micro-analysis for the purpose of detecting sodium. Many different uranium steels have been made, and the particular properties claimed for them are that the element increases hardness without loss in ductility, increases elastic limit and tensile strength, and toughens when used for manufacture

of cutting tools. Various rumours have from time to time been heard with regard to the use of uranium steels for armour plate and linings of big guns, but little seems to have been published on the subject, and it would appear unlikely that there is much opening for uranium steels unless the cost of uranium itself can be brought down considerably. In conclusion, it should be borne in mind that a full decade will probably have to elapse before the harnessing of atomic energy for any practical peace-time power production purposes is likely.

(Mr. Duveen recently relinquished his appointment as Technical Assistant to the Director of Ordnance Factories (Explosives), of the Ministry of Supply.—EDITOR.)

### MIDDLESEX PHARMACEUTICAL COMMITTEE

At a recent meeting of the County of Middlesex Pharmaceutical Committee, Mr. F. G. WELLS, immediate past-president of the Pharmaceutical Society, was re-elected *Chairman*. The other office-bearers are Mr. R. H. Rowson (Harrow), *Vice-chairman*, and Mr. J. Anderson Stewart, *Secretary*. Messrs. T. C. N. Booth, A. R. Cross, J. E. Goodall, L. Hayward and G. F. Weiss with the chairman and vice-chairman *ex-officio* were appointed members of the *Executive and Finance Subcommittee*, and Messrs. E. R. Jackson, J. E. Goodall and Miss M. E. H. Curry members of the *District War Committee*. The Committee received with regret the resignation of Mr. George Duncan after fourteen years' membership, and appointed Mr. G. Williams as his successor.

The Committee considered statistical data relating to prescriptions issued in the area of the Middlesex Insurance Committee during the months of February and March, and comparisons were made with preceding years. It was observed that the average cost of ingredients per 1,000 prescriptions in February amounted to £29 7s. 7d., and in March, £30 17s. 8d. These figures represented increases of 51.79 per cent. and 47.66 per cent. over the corresponding months in 1940, and an increase of approximately 4 per cent. in February and 1 per cent. in March over 1944. The dispensing fees in the two months were 17.88 per cent. and 19.64 per cent. above the 1940 figures, and approximately the same as in 1944.

A special subcommittee was appointed to deal with any developments arising in the school medical services scheme.

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AUGUST 25, 1945

NO. 3420

## Control of Opium

WITH the termination of the world war, the problem of international narcotics control comes once again into prominence. In this connexion the Government of the United States has given a useful lead by pointing out that lack of effective control after the first Great War resulted in widespread development of drug addiction, and suggests that the present time is a propitious one for "the elimination of the enormous over-production of opium." As a remedy for this abuse of opium, it is suggested that all poppy-growing nations should immediately enter into an international agreement which would reduce the production of the drug to the medical and scientific needs of the world. The gravity of the present situation is emphasised by the figure of world production of opium, which is estimated at 2,647 tons, against which must be placed the estimated annual requirements for medical and scientific purposes after the war at 440 tons, or one-sixth of the total opium produced.

### Large Quantities Smuggled

Instances frequently come to light of illicit possession of considerable quantities of opium, and it is recorded that in 1944 the largest single seizure of opium in the United States during the past six years was made by Customs Officers. It is claimed that the position will worsen considerably

when shipping restrictions are removed, unless the producing nations take preventive steps without delay. Owing to disorganisation incident to the war, addiction to dangerous drugs is alleged to be spreading in many parts of the world, and it has already been reported from reliable sources that important stocks of drugs are being held in certain countries by traffickers while awaiting an opportunity of directing the drugs to other countries, as soon as may be possible. To prevent illicit traffic in opium resulting from these conditions, the United States Government strongly urges that opium-producing and consuming countries exchange views and suggestions for the drafting of an international conference to which every country of the world should be a party. It may be assumed that the responsible authorities in this and other countries are fully alive to the dangers inherent in over-production of opium, and will take the necessary steps to ensure that control is applied at the most effective point, i.e. the source of production.

## Universities and Industries

THE news paragraph in our issue of August 4 (p. 106) recording the fear of the Association of University Teachers that the freedom of our universities in conducting scientific research is seriously threatened must have been read with considerable surprise. The report of the Association embodies the following statements: (1) That research workers feel compelled to publish results prematurely; (2) that the subsidising of research by industries may result in their commercial domination of universities. Premature publication of results in science often connotes inconclusive work: the remedy for this is obvious. The other alleged danger demands a more extended examination. In the "Statement on Problems of Scientific and Industrial Research" issued last year from Nuffield College, Oxford, the outcome of conferences attended by a large and well-balanced assembly of distinguished people, the relation between universities and industries was not overlooked. Referring to this relation as it affected research, we wrote (C. & D., 1944. II. 172): "Delimitation

between the research work of universities, technical colleges and industrial houses is, naturally, a feature of the report. There will be so general an agreement with the conclusions drawn that we need not refer to them in detail." As, however, this question has arisen, we may refer to the report again.

### Universities' Needs

On the needs of the universities, the Statement sets forth the conditions necessary for successful working in clear-cut and unexceptionable terms: "It is plainly undesirable that the Universities, whose primary task is to combine disinterested research designed for the advancement of knowledge with teaching work of a high standard, should to any considerable extent allow themselves to be diverted by offers of money prompted by prospects of commercial gain to work which they would not undertake on its own merits." Another point insisted on is the interdependence of research and teaching: "... these two functions of the Universities—fundamental research and teaching—must not be regarded as two separable activities which happen at present to be carried on in the same institutions. The Universities cannot be expected to teach well unless they also research, or to research well unless they also teach." And, as might have been expected, the freedom of the scientist is regarded as a basic condition:

"Fundamental research cannot be expected to show measurable results over short periods, or to be susceptible of detailed assessment by any external agency. The 'pure' research worker has to be left to a great extent free to follow his own instinct, not in isolation, but as a member of a group enjoying a similar freedom. To a considerable extent this same need for freedom holds good for applied research also, in its higher flights; and in the realm of fundamental research it is the *sine qua non* of success."

### Industries' Needs

The Statement is equally clear on the requirements of industry and on what universities can supply to meet them. In an early paragraph we read: "It is entirely against the interests of industry, as well as

of the Universities, to allow the fundamental side of University research to be neglected; for industry depends for long-run success in solving its problems of production and service on the steady development of fundamental research carried on in the spirit of pure inquiry." The same thought is expressed more fully in a passage near the end of the pamphlet:—

"The progress of applied science depends, in the long run, on there being a continual flow of new basic ideas and discoveries to be applied; and while the making of such discoveries is by no means exclusively the functions of the Universities, it is one of their functions, and one which must be protected against dangers that may threaten its adequate performance. Sharp lines, of course, cannot be drawn, and to a substantial extent the departments and institutes of applied science in the Universities can serve as bridges between the types of work mainly carried on in Universities and that done in Technical College Research Institutes, and other bodies concerned more directly with applied research."

### The Transition Period

During the period of demobilisation, long or short as the case may be, the relation between universities and industries is likely to attract less attention than of late because of what the Statement calls "a crisis of congestion," when provision must be made "for men and women returning from war service and for the normal inflow from the schools—to say nothing of numerous proposals for 'refresher' courses and research years for men and women already of senior standing in industry or in professional occupations of many kinds." This will mean that by far the greater part of the energies of university scientists will be absorbed in the task of satisfying urgent needs in teaching and in the organisation of studies. We know of no evidence to justify the pessimistic pronouncement of the Association referred to. If, however, the relation between universities and industries needs further attention at some time, the suggested small committee representing the two parties should be able to evolve a solution of any problems arising





## N.J.I.C. VOCATIONAL TRAINING SCHEME

The following particulars of the Vocational Training Scheme for Shop Assistants for Retail Pharmacy have been issued by the Joint Secretaries of the National Joint Industrial Council for Retail Pharmacy.

THE following is the syllabus of training agreed between the National Joint Industrial Council for Retail Pharmacy and the Ministry of Labour and National Service Training Department. In connexion with this scheme, the J.I.C. has resolved that, on completion of training, the rate of remuneration applicable to trainees should not be less than the rate for age for shop assistants provided for in the J.I.C. Agreement. It was also agreed that the initial intake be 500, this figure to be reviewed by the Council, in conjunction with the Ministry of Labour and National Service, in the course of the practical application of the Scheme. The persons to be admitted will be: (1) Disabled women; and (2) able-bodied women, these to include women who were in the trade before the war and were directed into National Service.

### Training of Shop Assistants

#### DRAFT OUTLINE OF SYLLABUS

##### Length of Course—13 Weeks

**Objective.** To prepare persons for entry into retail business as shop assistants having a basic knowledge of the main commodities and conditions pertaining thereto.

**Type of Training.** Training will be given in a class course of 36 hours per week. A further 8 hours per week may be spent in an employer's establishment.

**Subjects of the Course.** Subjects and time allotted per week are:—

- |   |          |
|---|----------|
| (1) Principles of shopkeeping and shop practice .. ..                   | 10 hours |
| 2) Legal requirements relating to premises, staff and merchandise .. .. | 2 hours  |
| (3) Commercial arithmetic and accounts .. ..                            | 4 hours  |
| (4) Government Regulations and Orders .. ..                             | 2 hours  |
| (5) Display, including colour study .. ..                               | 6 hours  |
| (6) Commodities .. ..   | 12 hours |

Total class course ..	36 hours
-----------------------	----------

- |  |         |
|--|---------|
| (7) Training in employer's establishment .. .. | 8 hours |
|--|---------|

#### Synopsis of Subjects.

(1) Principles of Shopkeeping and Shop Practice: (a) Functions of a shop assistant. (b) Main channels of retail distribution. (c) Retail business functions. (d) Organisation and methods of buying. (e) Selling. (f) Financial control. (g) Merchandise control.

(2) Legal Requirements: (a) Premises. (b) Staff. (c) Merchandise.

(3) Commercial Arithmetic and Accounts (a) Vulgar and decimal fractions. (b) Money weights and measures (British and Metric). (c) Percentages, simple interest, decimals. Elementary book-keeping.

(4) Government Regulations and Orders (a) Rationing. (b) Utility and austerity conditions. (c) Price control.

(5) Interior and Window Display, including Colour Study: (a) Test students' colour perception. (b) Colour—harmony contrast and discord. (c) Design. (d) Display to conform with foregoing knowledge applied to departmental and window dressing.

(6) Commodities (draft syllabus for retail pharmacy trainees set out in Appendix 2).

(7) Training in Employer's Establishment Object to obtain practice in the application knowledge during class course. Some visual, where appropriate, be arranged during stocktaking and other intermittent events which occur in the business.

### Commodities Course

The draft syllabus of training for persons intending to take up employment in retail pharmacy as "ordinary women shop assistants" is given below:—

#### Toilet Preparations and Requisites

Outlines of historical development. Hisology and physiology of skin, nails and hair maintenance of skin health; diet, exercise and personal hygiene in relation to physical health. Classification and recognition of normal skin types; skin nutrition. Classification of toilet preparations; study of types of materials used and physical characters of finished products.

Characteristics and uses of all types of facial creams and lotions, sunburn and suntan preparations, lipsticks, rouges and other "make-up" preparations, bath, hair and manure preparations; preparations for oral and "personal hygiene. Colour matching and odour harmony in use of cosmetics. Sales technique; modern display methods; selling points; advising on specific problems. Toilet requisites; study of types available; recognition of qualitative advantages and other sales points applicable to various types. Toilet preparations and requisites; stock control, stock records; storage conditions.

#### Cameras and Photographic Materials

Basic principles of photography; study of construction of types of cameras; handling and loading of cameras; detection of simple camera faults. Photographic terminology. Developing and printing materials; practical application of materials. D. & P. service; receiving work for processing; recognition of common faults in use of camera as shown by finished work.



Recognition of photographic accessories of all common types and knowledge of their functions. Photographic display. Storage conditions and their aspects of stock control.

### Domestic Chemicals and Chemists' Sundries

This section of training is not designed for and will not provide any training in the handling of drugs and medicines, except (i) in such packaging processes as would, if undertaken at all, be carried out under the personal supervision of a pharmacist; (ii) sales at the counter, in demand, of prepacked non-poisonous products.

External physical characters of the commoner domestic chemicals; chemical and domestic names of such substances; methods of packaging for sale. Recognition that there should be no uninformed handling of drugs and of medicines. Recognition of and knowledge of uses of commoner types of medical and surgical requisites. Recognition of and practical knowledge of uses of surgical dressings; knowledge of physical characters of materials commonly used.

Feminine hygiene; specialised knowledge of available commercial products. Baby foods and requisites; knowledge of products available and used in mothercraft, supplemented by visits to welfare clinics where possible. Elements of retail pharmacy routine and specialised stock control.

### DEPOSIT RATES ON MEDICINE BOTTLES

THE following communication has been issued by the National Pharmaceutical Union:—

As a result of negotiations which we have had with the Ministry of Health the deposit rates for medicine and poison bottles when applied to N.H.I. patients have been amended as follows:—

	Medicine bottles	Poison bottles
fl.-oz. (up to) .. .. .	2d.	2d.
" .. .. .	2d.	2½d.
" .. .. .	2d.	3d.
" .. .. .	2d.	3d.
" .. .. .	2½d.	4d.
" .. .. .	3d.	4d.
" .. .. .	3d.	4d.
" .. .. .	4d.	5½d.
" .. .. .	5d.	6½d.
" .. .. .	8½d.	10d.

These amended deposit rates come into operation forthwith and will apply until further notice.

**Memorandum on Hospital Diets.**—A memorandum on hospital diets has been issued by the diet committee of the King Edward's Hospital Fund for London.

## THE LONDON COLLEGE OF PHARMACY

THE London College of Pharmacy, the last of the privately-owned schools of pharmacy in London, is to be closed. This decision has been taken by the owner, Mr. C. W. Gosling, Ph.C., and the principal, Mr. I. G. Rankin, B.Sc., Ph.D., D.B.A., A.R.I.C., in agreement with the Council of the Pharmaceutical Society. War conditions have made the continuance of the College no longer possible. The College was founded by Henry Wootton in 1899, and is one of those proprietary colleges upon which pharmacy mainly relied for the training of its students up to as recently as 1919. It played an important part in providing facilities for ex-service students after the war of 1914-18. The activities of the College have not been restricted to the academic field. It has, for example, arranged an annual continental tour for its students during each Easter vacation. Belgium, Denmark, Sweden, Czechoslovakia, Switzerland and France were visited, usually on the invitation of pharmaceutical student societies of those countries. For nearly one-half of its life, Mr. I. G. Rankin has served as its principal and its varied activities owe much to his leadership.

### Service to Pharmacy

A Committee of the Council of the Society which discussed the closing of the College with the owner and the principal concluded their report with the following paragraph:—

The Committee desire to remind the Council that the London College of Pharmacy has for many years made a substantial contribution to pharmaceutical education. It rendered particular service at the end of the war of 1914-18, when large numbers of ex-service students strained teaching facilities to the limit. Proprietary schools are bound eventually to find the increasing demands of modern technical education beyond their resources and it is a testimony to the ability and energy of those who have directed the London College that it has for so long been able to continue its work. Its present proprietor and principal, and their staff, have, within the limitations of the conditions under which they have had to work, taken a wide view of their responsibilities. It will be a break with a long tradition of useful work when the last of the privately-owned schools of pharmacy in London closes its doors.

The colours of London College were light and dark blue. This led to its students adopting the name "Cyanides," and it is not inappropriate that this notice should conclude with the words *Valete Cyanida*.

## THE SOVIET PHARMACEUTICAL RESEARCH INSTITUTE

by Genady Smirnov, Director

**I**N 1929 a central pharmaceutical experimental station was set up under the People's Commissariat of Health of the Russian S.F.S.R. In 1939 it was reorganised as the Central Pharmaceutical Research Institute. Its main functions were to suggest improvements in order to facilitate the work of the pharmacist, to rationalise the production of drugs, to give the public a better pharmaceutical service, to perfect methods of research into drugs and medicines, to improve the quality of pharmaceutical products, and to organise the planning and efficient working of the pharmaceutical system.

### Labour-saving Devices

The Institute popularised the use of volumetric measuring instruments (burettes and pipettes), resulting in a great saving in time and labour and improving the accuracy of medicines made up in pharmacies. It also devised rationalised equipment of pharmacies, introducing, for example, tables accommodating two, four, six, or eight workers, so arranged that the dispenser is able to do all the work while seated; revolving stands for stock bottles; drawers for medicinal herbs at the dispenser's own table, in place of the tall and unwieldy cupboards which often required the use of a ladder; and similar improved equipment for those who check and issue the drugs, enabling them to perform their functions with a considerable saving of energy and movement.

### Prescription Study

The Institute made a study of prescriptions handled by pharmacies, and on the basis of the frequency of repetition made recommendations for the manufacture of standardised "half-way" products to facilitate and expedite the dispensing of prescriptions. Public health organisations maintain strict supervision over medicinal raw materials, pharmaceutical preparations and standard drugs. Every preparation supplied to pharmacies is submitted to qualitative and quantitative analysis in the control laboratory of the Pharmaceutical Administration, irrespective of whether it undergoes control analysis before leaving the factory. The medicines prepared in the pharmacies are checked for organoleptic effect and—by means of sampling—by chemical analysis. Every pharmacy has a controller, who is a skilled pharmacist.

Chemical analysis is performed in the pharmacy's own control point, and special analytical laboratories.

### Rapid Control Methods

The Institute directs the activities of the control laboratories and control points coming under the chief pharmaceutical administration of the People's Commissariat of Health of the Russian S.F.S.R. It has introduced improved methods of qualitative and quantitative analysis of such preparations as the sulphonamides, opium alkaloids etc. The Institute has worked out "express" methods of analysing medicines to aid the pharmacy control points. These methods permit them, with the expenditure of minimal quantities of reagents and of the tested drug, to check a large number of made-up medicines before issue. The Institute is also working to improve the manufacture of galenicals and to introduce new methods in laboratories and pharmacies so as to improve quality. Considerable attention is devoted by the Institute to the economics and planning of the pharmaceutical system. "Norms" of demand for medicaments, dressings and nursing equipment have been drawn up, making it possible to maintain proper proportions between the production and consumption of medical goods. To improve the service to the public, principles of distribution and location of pharmacies have been drawn up, and standard pharmacies of various capacities designed. The Institute also publishes a monthly magazine.

### War-time Difficulties

During the war the activities of the Institute were naturally governed by wartime exigencies. To meet the difficulty of supplying pharmacies with animal and vegetable fats used as bases for ointments the Institute worked out a suitable method of preparing ointments with an emulsifier base. It has likewise recommended and secured the adoption of methods of manufacturing medicines in tablets and powders instead of infusions, tinctures, and decoctions, thus effecting substantial economies in alcohol, fuel, power, receptacles, cork, packing, and transport. The Soviet pharmacopoeia provides that tinctures should be made with 70 per cent. alcohol. The Institute has experimented in making tinctures, as a war-time measure, with 40 per cent. alcohol, and thorough chemical



pharmacological and clinical tests have shown that the weak spirit fully extracts the active principle of most raw materials. In the recommendation of the Institute, the pharmacopoeial and pharmacological committees of the People's Commissariat of Health of the U.S.S.R. have sanctioned the use of a number of tinctures (valerian, opium, absinthium, etc.) made with weak alcohol, thus effecting a substantial economy in spirit.

#### Medicinal Use of Herbs

The war created an increased demand for medicinal goods, and the invasion necessitated the transplanting of a number of pharmaceutical manufacturing plants from the western to the eastern parts of the country. To overcome resulting difficulties in supplying war hospitals, civilian health institutions, and the general public, the Institute recommended the use of herbs which grow abundantly in the U.S.S.R. and which possess valuable medical properties. In two years a total of 3,620 tons of medicinal herbs was collected in the territory of the Russian S.F.S.R. and used to make infusions, decoctions, tinctures and extracts. The simples have in many cases proved to be adequate substitutes for complex chemical preparations.

The Institute has further made a study of other sources of raw material and of industrial by-products and waste, with a view to employing them for medicinal purposes. For instance, a simplified method is recommended for obtaining from local possum medical plaster of Paris for supply to war and civilian hospitals. Bentonite clays have been recommended as fillers for powders and as bases for ointments. The products of wood distillation and of other industrial processes are being utilised as disinfectants and as insecticides. A number of serious problems requiring urgent solution have been included by the Institute in its 1945 programme, some of which are: Manufacture of new galenicals freed from superfluous substances) by the method of dialysis; manufacture of dry, purified, standardised and stable preparations; study of the composition of galenicals with a view to instituting methods of controlling their quality; also study of preserving galenicals; rationalised methods of extracting active principles from medicinal plants; unification of methods of manufacture of galenicals, the working out of standard prescriptions; and elaboration of methods of physico-chemical analysis.

## SOUTH AFRICAN DOCTORS DISCUSS PROPRIETARIES

Two articles in which the authors recommend control of secret remedies appeared in the June issue of the "South African Medical Journal." One of the authors (Dr. N. Sapietka, University of Cape Town) observes that the ideal condition would be for Government laboratories to manufacture drugs, and control their distribution and sale through Government dispensaries, health centres, and pharmacies. Failing this, a Government department should, he suggests, be set up to deal with food, drugs, and cosmetics, with inspectors to enforce a series of amended regulations. The amendments suggested are: prohibition of secret remedies; registration of proprietary medicines; disclosure in advertisements and labels of details of the constituents; prohibition in advertisements and labels of names of diseases recommended for treatment, or at least prohibition of statements regarding relief or cure of such diseases as asthma, Bright's disease, cancer, tuberculosis, hernia, piles, epilepsy, obesity, paralysis, etc., or relating to the procuring of abortions, etc.; prohibition of false and misleading advertisements and illustrations; price control as in war-time. He also urges that vitamins should be made available at low cost; and suggests education of private citizens, young and old, in what to do in the event of illness, with adequate medical services within easy reach of every member of the population.

Dr. R. Turner (Union Public Health Department) says in the same issue of the "Journal" that there is no adequate legal control over the importation, manufacture, sale, and advertisement of the majority of proprietary medicines and appliances in South Africa, as there is elsewhere. The need for such legislation has been investigated officially, and a Bill has been drafted, but the Government's intentions in the matter are at present unknown.

The "Journal's" leading article states that urgent action is necessary for the control of secret preparations for which exaggerated claims are made, or which alarm invalids. The editor points out that errors in prescribing can lead to serious consequences for the prescriber. Advertising by doctors is not allowed, but unqualified or unregistered persons may sell almost any drug through second, third, and fourth parties, or through the post, without being incriminated.

## A SHORT HISTORY OF OPIUM

by J. Ross-Mansell, B.Sc., M.P.S.

*Temper'd with drugs of sovereign use I passage  
The boiling bosom of tumultuous rage;  
To clear the cloudy front of wrinkled care,  
And dry the tearful sluices of despair.*

—ODYSSEY, Bk. iv, l, 219, *et seq.*

THE first recorded use of opium goes back as far as 160 B.C., when Herac-  
lides, founder of what was later to be  
known as the empiric school of medicine,  
used the drug as an anodyne in painful dis-  
eases. *Papaver somniferum*, the poppy  
plant, was known in England as early as  
the Middle Ages, but the method of obtain-  
ing opium from it was acquired later. The  
knowledge of how opium is obtained from  
the wall of the seed capsules seems to have  
been brought back to Europe after the  
Crusades. Thomas Sydenham, a celebrated  
London physician of the seventeenth cen-  
tury, wrote of opium: "Of all the remedies  
which a kind providence has bestowed upon  
mankind for the purpose of lightening its  
miseries there is not one which equals opium  
in its power to moderate the violence of so  
many maladies and even to cure some of  
them. Medicine would be a one-arm man  
if it did not possess this remedy."

### "Stone of Immortality"

Paracelsus (A.D. 1525), the world's  
greatest chemical, medical, and pharma-  
ceutical iconoclast, carried a piece of opium  
in a secret place in the pommel of his sword,  
and called it, perhaps facetiously, his  
"stone of immortality." For many years  
after his death the word "laudanum"—  
said to be derived from the Latin *laudo*, to  
praise—was used to describe solid prepara-  
tions of opium, but it is a sad reflection on  
the unscrupulous manner in which the  
public of that day were defrauded that  
quite a number of "laudanums" did not  
contain opium at all. The first editions of  
the London Pharmacopœia had various  
formulas for laudanum, all of which, of  
course, did contain opium, mainly in com-  
bination with such other ingredients as  
saffron, musk, oil of nutmeg, ambergris,  
which were made into a tincture and then  
evaporated to form a pill mass. The alco-  
holic tincture was first used by Sydenham,  
who called it *tinctura opii crocata*, since it  
contained saffron, in addition to opium.  
The tincture is still official in various  
foreign pharmacopœias, and was claimed  
by Sydenham to have done much to alle-

viate the horrors of the great plague epi-  
demic of 1665.

Not until 1803 was any serious attempt  
made to find the active principle of opium.  
In that year a French pharmacist (Derosne)  
thought he had discovered it; but, as was  
shown later, he had only succeeded in  
isolating narcotine, which for some time  
was called Derosne's salt. Another French  
pharmacist (Robiquet) announced the dis-  
covery of codeine in 1815. Morphine was  
obtained in a pure state by the German  
apothecary, Friedrich Sertürner, in Eisen-  
beck, in 1806, though for some obscure  
reason he did not publish the fact until ten  
years later. Sertürner also determined the  
chemical nature of opium, and finally  
showed that its effect was mainly due to  
morphine. Subsequent research in various  
countries showed that codeine, papaverine,  
narcotine, and thebaine are derived from  
morphine by the substitution of the alko-  
holic radicals.

### Oral to Subcutaneous Administration

The action of opium on the brain,  
especially when administered in the solid  
form by the mouth, is uncertain. Its ad-  
ministration by the mouth has largely been  
superseded by subcutaneous methods. Fre-  
quent attempts had been made over a  
number of years to find some method  
other which was reliable and practicable  
to administer powerful drugs other than  
by the oral route. In 1855, A. Wood  
("Edinburgh Medical and Surgical Journal"  
LXXXII. 265) suggested that the syringe  
and tubular needle constructed by Pravaz  
and Fergusson, and used by surgeons to  
inject astringent fluids into aneurisms and  
naevi, might be successfully used for the  
introduction of easily-soluble preparations  
of opium under the skin. As is all too fre-  
quent in medical and pharmaceutical his-  
tory, there was delay before the method  
was generally approved, and then the  
method was, in fact, only taken up in  
Britain five years later, after it had been  
re-imported from Germany in the shape  
of a lengthy treatise by von Graefe ("Archiv  
für Ophthalmologie," 1863), who pointed  
out its great value in ophthalmic practice.  
The first use of morphine subcutaneous-  
ly on any large scale in a war was after the  
battle of Rezonville, near Metz, in August  
1870, when a German physician (Car-  
l Binz) introduced the method into his field



ospital. It was soon found that a patient racked with pain, and experiencing the ease and comfort afforded by a morphine injection, began to beg for the dose to be repeated. The seductive and soothing influence of the drug made it a daily necessity to his nervous system, but each day demanded an increase of dose to overcome the growing tolerance of the nervous system to the drug. The most marked symptoms that result from sudden deprivation of the drug are cerebral excitement, extreme restlessness in all the muscles, and pain in the stomach, associated with a burning sensation in the back. A vivid account of the depravity which the morphine habit can produce has been given by several writers. The Autobiography of a Drug Addict," by Francis Chester, a modern writer, is a truthful account of the hold the drug can have.

Before the introduction of the Dangerous Drugs Acts, quite apart from the moral damage morphine had done, it was also playing an important part in cases of poisoning in this country and the United States, probably the last two countries to fall into line with the strict control that had existed on the Continent. Taylor, "On Poisons in Relation to Medical Jurisprudence and Medicine," 1875 (third edition, 1950), reports that nearly two-thirds of the deaths caused by poisoning were due to morphine. The strict and very salutary laws that now exist prevent such thoughtless abuses. Diagnosis of morphine poisoning is easy. Preparations of opium are recognised by their characteristic odour, this has not been destroyed by the addition of other substances. Poisoning by morphine may, however, be mistaken for that which results from large doses of alcohol, chloral, carbon dioxide, or coal gas; but with these, although almost all the symptoms and signs of morphine poisoning may be present, one sign is usually absent—the strongly marked myosis or contraction of the pupil. This is invariably present in morphine poisoning, passing off only in the last stage. The precise differences of action between morphine and the total alkaloids of opium are even at not fully understood; but since the original introduction of the British preparation (which is now known as papaveretum, B.P.C.) an opium is available in which the alkaloids are present in definite quantity and unvarying ratio. By reason of its composition, the pharmacological and therapeutic effects of this preparation are those of opium at its best.

## AMERICAN NOTES

**Scientific Research Foundation Proposed.**—Dr. Vannevar Bush, director of the United States Office of Scientific Research and Development, submitted on July 18 a report recommending the establishment of a permanent scientific research foundation to be financed by the Government.

**United States Senator to Study Small Business.**—Senator Claude Pepper discussed with President Truman on August 13 plans for a trip to Europe to study the future of small business in England and the Continent. Senator Pepper said he planned to visit business leaders in the British Isles, France and Germany to discuss plans for the post-war development of small business.

**U.S. Army Amputations.**—Amputation cases in Army hospitals in the United States, including cases already discharged, numbered approximately 11,000 on May 1. Approximately 5 per cent. of cases had lost more than one limb. Close on 4,000 had been discharged into civilian life, but some soldiers, given the choice, elected to remain in the Service, and have been given duties in the training of other amputees.

**Gift for Cancer Research.**—A grant of \$4,000,000 has been made to the Sloan-Kettering Institute for Cancer Research at the Memorial Centre, New York, by Mr. Alfred P. Sloan (chairman, General Motors Corporation). Research work under the grant will be concentrated on the organisation of industrial techniques for cancer research. Half of the money will be for buildings and the remainder will provide an income of \$200,000 annually for ten years towards working costs. It is hoped that the grant will prompt others interested in cancer research to make donations, and a public campaign is being launched.

**Philippines Coconut Oil.**—Information received from the Philippine Islands subsequent to their reconquest by the United States Forces, indicate that it will be a long time before coconut oil will again be shipped from what was formerly an important source of U.S. supplies. During the occupation of the islands by the Japanese plants used for expressing the oil were dismantled and used as scrap iron by the Japanese. Not until new machinery can be sent in will exports recommence, for it is not considered likely that shipping space will be allotted for so bulky a commodity as the nuts themselves, even if labour and machinery were available in the States for dealing with them.

## TRADE REPORT

Spot quotations for pharmaceutical chemicals, crude drugs and essential oils represent the prices for wholesale quantities of standard quality. C.i.f. quotations do not include marine war risk insurance and other abnormal charges payable in the present emergency.

### 28 Essex Street, W.C.2, August 22

THE cessation of hostilities in the Far East will have an important effect on the drug markets in due course by permitting the release of a large number of natural commodities long denied to the trade in this country. It is far too early, of course, to form any sort of estimate of the probable course of events, but it is obvious that once commerce with the liberated territories is again possible many drugs now in short supply or actually exhausted will once more appear on the markets. Outstanding examples are QUININE and RUBBER, while less important items include BENZOIN, GALLS and RHUBARB. It is quite likely that as a result of the turn of events plantations will be found to be virtually intact and no doubt experts are ready to make an inspection as soon as possible. With regard to products from Japan, the future will depend on the nature of the settlement and the ability of the Japanese to export the products formally associated almost exclusively with that country. Meanwhile conditions in the London markets remain exceedingly quiet with very few price changes to record. A good deal of inquiry from the Continent is again in evidence, but it is mostly for articles at present in short supply. Makers of PHARMACEUTICAL CHEMICALS report a steady business with no important price changes. Some concern is again being expressed in this section at the slowness in turn round of packages and the need for attention to this factor on the part of consumers is emphasised. There is little doubt that business could be speeded up if packages, particularly those required for specific articles, could be more promptly returned.

### Crude Drugs

ANTIMONY is in steady demand at prices showing no change from recent quotations. Dealers are still offering wormy ARECA NUTS at the price stated. Canada BALSAM is costing more for available supplies. Offers of COPAIBA are reported from origin. CARDAMOMS are quiet and unchanged. CLOVES have again been reduced, but the price is still substantially above that which would permit of a lower price for distilled oil. Some MALE FERN ROOT may

be obtained on spot. QUILLAIA BARK is dearer. Apart from some inquiry SEEDS are without interest. Higher prices are noted from origin for Tinnevely SENEPODS and LEAVES and future spot quotation will probably be dearer. Fatty grade CARNAUBA WAX is quoted higher.

### Essential Oils

This market provides very few topics for comment. Prices for such oils as are obtainable are generally high, but the extent of business transacted is negligible. English-distilled CLOVE is very firm and not too plentiful supply. The current reduction in the price of cloves will not affect the oil, the cost of which is based on a figure lower than that now ruling. NUTMEG is rather difficult owing to the scarcity of raw material and a higher price is generally indicated. No price changes have been notified for the CONTROLLED OILS.

### Pharmaceutical Chemicals

ALLOBARBITONE.—Unchanged at 60s. per lb.

BARIUM SULPHATE (x-ray).—Quoted at the following rates per lb., for lots of 28 lb.—1 cwt (containers in brackets): 1s. 5½d. (1-lb.); 1s. 4d. (4-lb.); 1s. 3d. (7-lb.); 1s. 2½d. (14-lb.); 1s. 2d. (28-lb.).

BORAX.—Current rates per ton are as follows: B.P. quality, granulated, £38; crystal, £39 powder, £39 10s. Commercial grades, £8 per ton less. Packed in one-cwt. bags, delivered carriage paid in Great Britain in one-ton lots and upwards.

BORIC ACID.—Current rates per ton are as follows: B.P. quality, granulated, £60; crystal, £61; powder, £62. Commercial grades, £8 per ton less. Packed in one-cwt. bags, delivered carriage paid in Great Britain in one-ton lots and upwards.

BRUCINE.—Current rates per oz. are as follows: ALKALOID.—Under 25 oz., 1s. 4½d.; 25 oz. and under 100 oz., 1s. 4d.; 100 oz. and under 500 oz., 1s. 3½d. NITRATE and SULPHATE.—Under 25 oz., 1s. 3½d.; 25 oz. and under 100 oz., 1s. 3d.; 100 oz. and under 500 oz., 1s. 2½d.

CALAMINE, B.P.C.—Quoted at 1s. 8d. per lb. for 7-lb. lots and 1s. 6d. for 28-lb. lots.

CODEINE.—Current prices per oz., for small lots, are as follows: BASE.—½ oz., 55s. 3d.; 1 oz., 52s. 9d.; 2 oz., 51s. 3d.; 3 oz., 50s. 6d.; 4 oz., 50s. 3d. HYDROCHLORIDE.—½ oz., 50s.; 1 oz., 47s. 6d.; 2 oz., 46s.; 3 oz., 45s. 3d.; 4 oz., 45s. PHOSPHATE.—½ oz., 43s. 9d.; 1 oz., 41s. 3d.; 2 oz., 39s. 9d.; 3 oz., 39s.; 4 oz., 38s. 9d.



**DEXTROSE.**—Current prices per lb., in lots of 28 lb.—1 cwt., are as follows (containers in brackets): 1s. 2½d. (1-lb.); 1s. 1½d. (2-lb.); s. 0½d. (4-lb.); 11½d. (7-lb.); 11½d. (14-lb.); 0½d. (28-lb.).

**DIAMORPHINE.**—Current rates per oz., for small quantities, are as follows: BASE.—½ oz., 5s. 6d.; 1 oz., 56s.; 2 oz., 54s. 6d.; 3 oz., 3s. 9d.; 4 oz., 53s. 6d. **HYDROCHLORIDE.**—½ oz., 54s. 3d.; 1 oz., 51s. 9d.; 2 oz., 50s. 3d.; 3 oz., 49s. 6d.; 4 oz., 49s. 3d.

**EMETINE.**—British importers' prices are as follows: **EMETINE HYDROCHLORIDE**, U.S.P., 5 oz., 175s. 6d.; 4 oz., 178s.; 1 oz., 185s. **EMETINE BISMUTH IODIDE**, B.P. (Brazilian origin), 16 oz., 85s. 6d.; 4 oz., 87s.; 1 oz., 8s. 6d. per oz.; usual terms.

**ETHYLMORPHINE.**—Small quantities are quoted per oz. by makers as follows: BASE.—½ oz., 61s. 6d.; 1 oz., 59s.; 2 oz., 57s. 6d.; 3 oz., 56s. 6d.; 4 oz., 56s. 6d. **HYDROCHLORIDE.**—½ oz., 53s.; 1 oz., 50s. 6d.; 2 oz., 49s.; 3 oz., 48s. 6d.; 4 oz., 48s.

**HOMATROPINE.**—Makers' prices per oz. are as follows (prices per gram in brackets): **ALKALOID.**—1 oz., 97s. 6d.; 4 oz., 92s. 6d.; 1 oz., 87s. 6d. (6s.). **HYDROCHLORIDE, HYDROBROMIDE AND SULPHATE.**—1 oz., 75s.; 4 oz., 65s.; 16 oz., 65s. (3s. 2d.).

**IODINE PREPARATIONS.**—Prices per lb. for the home market are as follows: **POTASSIUM IODIDE**, B.P.—112 lb., 9s.; 28 lb., 9s. 6d.; 1 lb., 10s.; 7 lb., 11s. 6d.; 4 lb., 12s.; smaller quantities, 12s. 6d. **SODIUM IODIDE**, B.P.—1 lb., 9s. 11d.; 14 lb., 10s. 5d.; 7 lb., 12s. 2d.; 1 lb., 12s. 10d.; smaller quantities, 13s. 8d. **DOFORM**, B.P.—28 lb., 12s. 10d.; 14 lb., s. 4d.; 7 lb., 15s. 6d.; 4 lb., 16s. 4d.; smaller quantities, 17s. 2d. **IODOFORM CRYSTALS.**—per lb. above powder prices. **IODINE REBLIMED**, B.P.—112 lb., 10s. 4d.; 28 lb., s. 10d.; 14 lb., 11s. 4d.; 7 lb., 13s. 1d.; 1 lb., 13s. 9d.; smaller quantities, 14s. 6d.

**MAGNESIUM CARBONATE, LIGHT.**—Makers' home market prices per lb., in quantities of 1 lb.—1 cwt., are as follows (containers in brackets): 1s. 3½d. (1-lb.); 1s. 2d. (4-lb.); 1d. (7-lb.); 1s. 0½d. (14-lb.); 1s. (28-lb.). Prices net one month.

**MAGNESIUM TRISILICATE.**—Home market prices per lb., for quantities of 28 lb.—1 cwt., are as follows (containers in brackets): 5s. 9d. (1-lb.); 3s. 7½d. (4-lb.); 3s. 6½d. (7-lb.); 3s. 6d. (14-lb.); 3s. 5½d. (28-lb.). Prices net one month.

**MANDELATES.**—Makers' quotations are unchanged. **SODIUM AND CALCIUM.**—4 oz., 8 oz., 1 lb., 22s. per lb.; 4 lb., 20s. 3d.; 7 lb., s. 6d.; 14 lb. (in 7-lb. packages), 16s. 9d.; 1 lb. (in 7-lb. packages), 15s. per lb. net. **MONIUM** (50 per cent. solution).—4 oz., 8 oz., 1 lb., 11s. 9d. per lb.; 4 lb., 10s. 9½d.; 7 lb., 10d.; 14 lb. (in 7-lb. packages), 8s. 11½d.; 1 lb. (in 7-lb. packages), 7s. 11d. per lb. net. Packages extra and returnable.

**MANDELIC ACID.**—In good demand; 1 lb., s. per lb.; 4 lb., 20s. 3d.; 7 lb., 18s. 6d.; 1 lb., 16s. 9d.; 28 lb., 15s. Sodium and calcium salts are at the same prices.

**METHYL SALICYLATE.**—Continues in good demand at unchanged prices. Smalls, 2s. 6d. per lb.; winchesters, 2s. 1½d.; 56 lb., in demijohns, 2s.; 1 cwt., in demijohns or carboys, 1s. 11½d.; 5 cwt., 1s. 11d. All prices net.

**PHENOLPHTHALEIN.**—Current rates are as follows: Less than 7 lb., 4s. 8d. per lb.; 7 lb., 4s. 7d.; 14 lb., 4s. 6d.; 28 lb., 4s. 5d.; 1 cwt., 4s. 4d.

**PILOCARPINE.**—Makers quote at the following rates per oz.: BASE, 1 oz., 27s.; 4 oz., 21s. 3d.; 8 oz., 20s. 9d.; 25 oz., 20s. 3d. **NITRATE**, 1 oz., 18s. 6d.; 4 oz., 18s.; 25 oz., 17s. 6d.

**SALICYLIC ACID.**—Quoted per lb. as follows, in lots of 28 lb.—1 cwt. (containers in brackets): 2s. 7d. (1-lb.); 2s. 5½d. (4-lb.); 2s. 4½d. (7-lb.); 2s. 4d. (14-lb.).

**TERPINEOL.**—Pure medicinal quality is available at from 3s. 3d. to 4s. per lb. for use in antiseptics of the chloroxylenol type.

**VANILLIN.**—The agreed prices are unchanged as follows: 5 cwt., 21s. per lb.; 1 cwt., 21s. 3d.; 56 lb., 21s. 6d.; less than 56 lb., 21s. 9d. per lb.

## Crude Drugs

**ANTIMONY.**—In steady demand at unchanged prices. English minimum 99 per cent. regulus, £112 10s., per ton delivered; 70 per cent. crude, for the home trade, £90.

**ARECA NUTS.**—Dealers continue to offer wormy material at 85s. per cwt.

**BALSAMS.**—*Peru* is steady on spot at 8s. per lb.; *Canada*, 12s. to 12s. 6d. per lb., if obtainable; *Copaiba*, offers from origin now seem to be reaching the market.

**BELLADONNA.**—English herb is quoted at 4s. 6d. per lb. Indian root, testing 0.25 per cent., would be worth 2s. 3d. per lb., if available.

**BISMUTH.**—Price of the metal remains at 6s. 3d. per lb., for minimum 5-cwt. lots.

**BUCHU LEAVES.**—Limited lots on spot quoted at 5s. 3d. per lb.

**CARDAMOMS.**—Very quiet and unchanged. Current prices are as follows: Aleppy greens, spot, 5s. 6d. per lb.; Aleppy seed, 6s. 3d.

**CHAULMOOGRA.**—*Hydnocarpus*, spot, 2s. per lb., in tins in cases.

**CHILLIES.**—Spot, Mombasa, 105s. per cwt.; West African, 105s.

**CINNAMON CHIPS.**—Quoted on spot at 2s. 2d. per lb., ex store London.

**CLOVES.**—Market quiet and easier. Zanzibar, spot, 1s. 6d. per lb., sellers.

**COCHINEAL.**—About 6s. per lb. would be wanted on spot for silvers.

**COLOCYNTH.**—Fair white material steady on spot at 2s. 6d. per lb.

**DIGITALIS LEAVES.**—Quiet and unchanged. Portuguese, spot, 140s. per cwt.; English 2s. 6d. per lb.

**ERGOT.**—Any available good-quality material would be priced at about 6s. 6d. per lb., but supplies are scarce.

GUM ACACIA.—Kordofan cleaned sorts, spot, 70s.; bleached, 175s.; Talha, cleaned, 47s. 6d.

HENBANE.—Indian, spot, 250s. per cwt.; Egyptian (*muticus*), 85s.

JALAP.—12 per cent. is priced at 4s. 6d. per lb., and 10·1 per cent. at 3s.

KAMALA.—Material testing 6 per cent. ash is unaltered at 2s. 6d. to 2s. 9d. per lb. on spot.

LIQUORICE ROOT.—Turkish, afloat, 85s. per cwt., landed; shipment, 75s.

MALE FERN ROOT.—Indian may be obtained on spot at 77s. 6d. per cwt.

MENTHOL.—Brazilian is quoted on spot at 82s. 6d. to 85s. per lb.

MERCURY.—Official quotations range from £68 10s. to £69 15s. per flask, according to conditions and quality, with higher prices for smaller lots and redistilled grades.

NUX VOMICA.—Cochin, spot, 37s. 6d. to 40s. per cwt.; shipment, 31s. to 32s., c.i.f.

PEPPER.—Whole, not picked over or cleaned, on sale to processors, is officially priced at 1s. 4d. per lb. for white and 1s. per lb. for black.

PIMENTO.—Sellers on spot at 1s. 3½d. per lb.

QUASSIA CHIPS.—Spot, quoted at 38s. per cwt., ex store U.K.

QUILLAIA BARK.—Spot, natural, 85s. per cwt.; cut, 110s.

SEEDS.—Prices are unchanged; market quiet. Current rates are as follows: CORIANDER.—Indian, none available, price nominal at 92s. 6d. per cwt.; Russian, fair amount here, but demand small, price 92s. 6d.; English, limited stocks, price 87s. 6d. to 95s. per cwt. CUMIN.—Maltese, 120s., sellers; Indian, same. DILL.—London, 85s.; Liverpool, 80s. FENNEL.—Supplies exhausted, nominal. FENUGREEK.—London, 75s.; Liverpool, 70s.

SENNA.—Alexandrian hand-picked pods are scarce; price nominal at 4s. per lb. Good manufacturing Alexandrian pods, 2s. per lb. Higher prices for Tinnevely pods and leaves are coming from origin and spot buyers will probably have to pay increased rates.

STRAMONIUM LEAVES.—Dealers quote at 80s. per cwt. on spot.

STROPHANTHUS SEED.—Spot quotation for 100 per cent. Kombé is unchanged at 7s. 6d. per lb., with business quiet.

TRAGACANTH.—Medium grades are quoted as follows: No. 1, white, £130 per cwt.; No. 2, white, £115; No. 3, white, £100; No. 4, white £85; pale leaf, £60; amber leaf, £50; dark amber, £35; brown leaf, £25; red-and-brown leaf, £20; red leaf, from £17; hoggy, £12 to £15.

TURMERIC.—Madras finger, sound-quality, spot, Liverpool, 77s. 6d. per cwt. For good-coloured fine powder, from 105s. to 110s. would be wanted.

WAXES.—BEES'.—Prices of crude for the home trade were given in the *C. & D.*, June 2, p. 570. CARNAUBA.—Fatty grey, spot, 490s.; chalky grey, spot, 475s.; prime yellow, spot, 585s. OURICURI.—Spot, 310s. to 320s., according to quality; shipment, 285s., c.i.f.

## Essential and Expressed Oil

CASTOR.—Official prices for bulk supplies as follows: "Firsts," £82 per ton; "second" £80, both prices naked ex works.

CLOVE.—English-distilled continues very firm at 12s. 6d. to 13s. per lb., according to quantity with supplies not too easily available.

CORIANDER.—English oil, in small compass available at about 180s. per lb.

COTTONSEED.—Controlled prices for bulk supplies are as follows: Crude, £52 2s. 6d. washed, £55 5s.; refined edible, £57; refined deodorised, £58 per ton; all varieties are quoted naked ex works.

NUTMEG.—Supplies are short with 55s. 60s. per lb. indicated for English-distilled oil.

OLIVE (EDIBLE).—The price charged to wholesaler by the importers is 25s. 9d. per gallon ex store. Prices charged by wholesalers retailers are agreed by the Ministry of Food follows: 33s. 6d. per gallon, in 1-gallon loan cans; 34s. 3d. per gallon, in ½-gallon loan cans; 35s. per gallon, in 1-quart loan cans; 36s. 1d. per gallon, in 1-pint loan cans.

RAPESEED.—Official price for bulk supplies remains at £88 per ton.

## TRADE MARKS

(From "The Trade Marks Journal," August 1)

"PAL"; for razor blades (6). By Pal Blade Co. c/o Stevens, Langner, Parry & Rollins, 5-9 Quality Court, Chancery Lane, London W.C.2. 633,541.

Monogram of letters P.R.S.I. in circle; 1 scientific instruments, etc. (9). By Pa Royal Scientific Instruments, Ltd., Minerva Road, London, N.W.10. 634,37.

"PLIM"; for hypodermic syringes, hypodermic and surgical needles, surgical instruments (10). By N. Phethean, Ltd., 26 Croydon Road, Caterham, Surrey. 634,505.

"KAROL"; for edible oils and fats, etc. (2). By the Karitane Products Society, Ltd. c/o H. D. Fitzpatrick & Co., 49 Chancery Lane, London, W.C.2. 632,161 (Associated).

### CONVERSION OF SPECIFICATIONS

Section 36 (3) and Rules 6 to 8

To Schedule IV (with amalgamation)

Specification No. 91,177, by the Erasmic Co. Ltd., for laundry preparations, perfume soap, cosmetic and toilet preparations, etc.

CLOSED ON SATURDAYS.—Advertisers and subscribers are reminded that owing to present conditions the Head Office of THE CHEMIST AND DRUGGIST, 28 Essex Street, London, W.C.1, is closed on Saturdays until further notice. Urgent instructions relating to advertising and subscriptions should be sent to the *C. & D.* 17 Argyle Street, Bath, Somerset.





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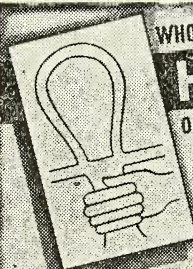
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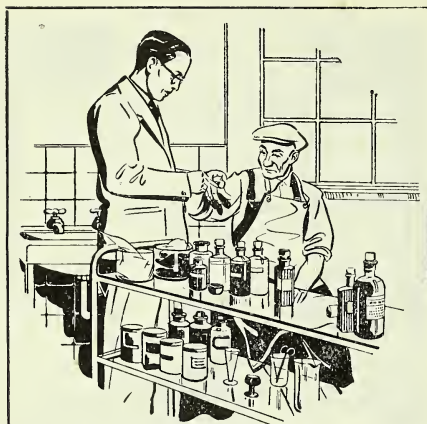
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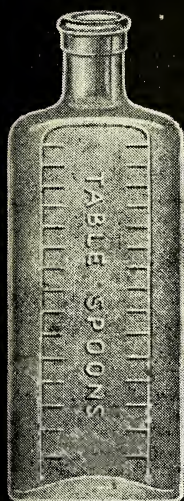
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NEATLY PACKED IN 6 DOZEN  
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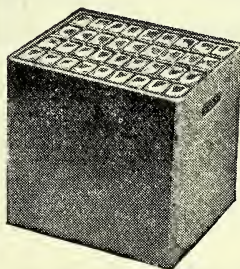
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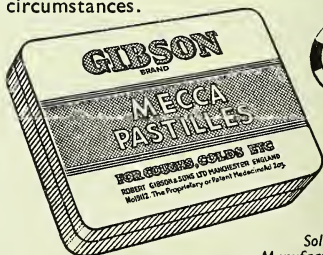
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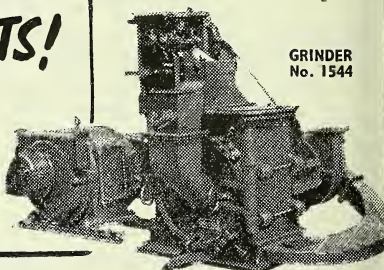
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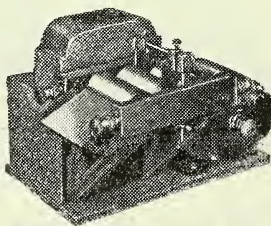


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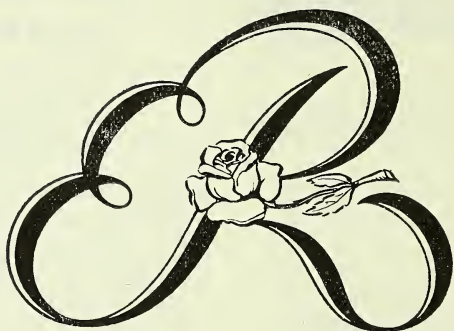
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# The CHEMIST AND DRUGGIST SUPPLEMENT

This Supplement is inserted in every copy of The Chemist & Druggist

AUGUST 25  
1945

28, ESSEX STREET, LONDON, W.C.2

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**URGENTLY** wanted, Qualified Manager to take full control of good middle-class Pharmacy in S.E. London, with important connexions with local doctors; experience in medical and surgical products an advantage; excellent opportunity for progressive man; easy hours; generous remuneration. Reply, K. J. Archer, 255 Brockley Road, S.E.4.

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**WANTED**, male Dispensing Chemist for Salisbury, Rhodesia; must have M.P.S. qualifications and preferably necessary training to become manufacturing chemist. Write full details to Box ZY/549, Deacon's, 36 Leadenhall Street, London, E.C.3.

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**LOCUM** with dispensing experience for two or three weeks from September 10. Qualification not essential. Reply with copy of one recent reference. State age, experience, salary required and if qualified. H. M. Harvey, 3 Beeches Avenue, Carshalton, Surrey.

**QUALIFIED Locum**, September 24th to 30th, N. London. Phone: Arch 1442.

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**ESSENCE** Comptounder (Chemist) required to extend existing department in well-known firm. Excellent opportunity for really enterprising person. 622/422, C. & D. London Office.

**EXECUTIVE** positions of considerable responsibility and opportunity are available in our Indian sales organisation; a pharmaceutical qualification with marketing experience is desirable, but not essential; preference will be given to candidates who are under 30 and unmarried. Apply, with full particulars of education, previous business experience, and position in relation to National Service, to Personnel Manager, Allen & Hanburys, Ltd., London, E.2.

**EXPERIENCED** Works Chemist required to take charge of small-scale organic chemicals production; must have administrative ability, and a knowledge of chemical engineering would be considered an advantage. Write, giving details of age, qualifications, and past experience, to British Schering Manufacturing Laboratories, Ltd., c/o P.O. Box 407, Manchester.

**EXPERIENCED** Chemical and Drug Packers required by Manufacturing Chemist in West London district; excellent prospects to suitable applicants. Send full particulars to 622/407, C. & D. London Office.

**EXPORT** Senior Sales Correspondent and Assistant required by progressive City firm of Distributors and Manufacturers of Chemicals and Pharmaceutical Products. Sound knowledge of Middle East and Indian markets and Export procedure essential. Applications invited from ex-Service men and others, stating age, salary required languages and date when free, to Retco (Reciprocal Trading Corporation), Ltd., Chemicals and Pharmaceutical Dept., 117 Fenchurch Street, London, E.C.3

**EXPORT** Clerk required (male or female) by firm of Manufacturing Chemists; offices West London; thoroughly familiar shipping formalities; import licences routine, etc.; permanent progressive post; no Saturdays. Apply, giving full details of experience, salary required, 622/408, C. & D. London Office

**FIRST-CLASS** Representatives required by manufacturers of high-class ethical products advertised in the National and Medical Press for (a) South of England, (b) Bristol and West of England (c) Nottingham, Derbyshire, Lincs, etc. Application only considered from men with stability and initiative capable of substantial earnings with established connexion amongst retail and wholesale chemists. Salary, expenses and commission. 620/368, C. & D. London Office.

**GENERAL** Manager (age 35 or over) required for Chemical Department; only those with good experience in buying and selling of fine chemical need apply; good salary given to right man. Reply giving full particulars of experience, should be addressed to Managing Director, Carnegie Bros. Ltd., 227-229 Essex Road, London, N.1.

**GOOD** opening with tremendous opportunity for Qualified Chemist with knowledge of manufacturing Tinctures, Infusions, Decoctions, Extracts etc. Applicant must be able to make own working tests, and capable of turning out 100 per cent. products. Send full particulars, in first instance, to Galenicals, 616/233, C. & D. London Office.

**LANCASHIRE** Manufacturing Chemists require Chemist for research and formula development work, together with some routine analysis. Excellent prospects for suitable applicant with good qualifications and experience. 620/365, C. & D. London Office.

**LONDON** Area Representatives (2) required by leading City firm acting as Distributors and Manufacturers of important Pharmaceutical Product and Bulk Chemicals. Chemists' and Merchants' connexions essential and some knowledge of Public Health sales propaganda desirable. Age limit 30-47, qualified or unqualified, preferably from ex-Service men. Salary, commission and expenses. Write only to Retco (Reciprocal Trading Corporation), Ltd. Chemicals and Pharmaceutical Dept., 117 Fenchurch Street, London, E.C.3.

**MANUFACTURERS** of exceptionally attractive and saleable post-war specialities require Commission Agents for the following areas: North and Central London, North and South Wales, Lancashire and Eastern and Northern Counties, Lancashire and Cheshire. Applications will only be considered from men of stability and initiative handling not more than two lines with established connexion amongst retail and wholesale chemists, co-ops, all stores. Substantial incomes can be earned by right men. Full particulars required. 622/431, C. & D. London Office.

**MANUFACTURER** of high-quality Disinfectant and allied products seeks Agents contacting Hospitals, Infirmarys, Clinics, Cinemas, and Public Institutions; really competitive price and generous terms. Box 125, c/o Pool's, Aldwych House, London, W.C.2.

**MANUFACTURING** Chemist requires full-time Representative for West, South and East London territory. Applicants with connexions among Chemists in this territory especially favoured. Attractive situation for energetic candidate. Write in first instance, full particulars to 618/301, C. & D. London Office.



**OLD-ESTABLISHED** Manufacturing Chemists have two vacancies: (1) Assistant Works Manager for factory in South Midlands 50 miles from London; (2) Assistant Works Manager for factory London area. Applicants should have good general education and either (a) training in engineering and experience in filling and packing proprietary products on automatic plant, or (b) degree in chemistry and experience in manufacture of ointments and toilet articles. Ability to control labour necessary. Under 40 years of age. There are brilliant prospects for really good man. Write full details age, education, experience, when free to start, and commencing salary required to 620/355, C. & D. London Office.

**OPPORTUNITY** for Analytical Chemist with good knowledge of Pharmaceutical and Perfumery manufacturing, with organising ability and business acumen, prepared to invest capital. Could also apply to a link-up of an already established concern. Advertiser, medium size Yorkshire concern of manufacturing Chemists. Replies in confidence. 20/347, C. & D. London Office.

**OLD-ESTABLISHED** Company marketing nationally advertised proprietary medicines require capable energetic man as Assistant to Manager. Excellent prospects for man with all-round experience in this field, including advertising, marketing, office management, etc. Highest credentials essential. Send fullest particulars in strict confidence stating age, past experience, salary expected, etc., to 622/423, C. & D. London Office.

**REPRESENTATIVES** are required for a high-class branded and advertised product in five areas: (1) The Midlands (Salop, Staffs, Leicester, Wores, Warwick, and Northants); (2) South Wales with Glamorganshire and Glos.; (3) Eastern Counties (Lines, Norfolk, Suffolk, Cambs, Hunts, and Beds); (4) South Eastern Counties (Essex, Kent, and Sussex); (5) Southern Counties (Dorset, Hants, Wilts, and Wicks). Applications are invited from active Representatives in the above areas, who have an established connexion with good-class Retail Chemists, and who wish to add a non-competing line, on commission only, to their existing representations. Highest references given and required. Replies in strict confidence to 622/428, C. & D. London Office.

**SCOTCH PRODUCTS, LTD.** have a vacancy for a Pharmacist as Medical Representative in the Edinburgh district; must be a Scot, and preferably have a knowledge of Edinburgh; previous experience essential. Applications, giving usual details of career, to Welwyn Garden City, Herts.

## SITUATIONS WANTED

2/6 for 18 words or less, 1d. for every additional word.

### RETAIL (HOME)

**DISPENSER** (lady), Apothecaries' Hall certified, requires position with doctor, hospital, etc.; London or Home Counties. Write Box No. 544, 44 Chancery Lane, W.C.2.

**GENTLEMAN**, over 30 years' experience retail, 25 years West End, desires change where ability hard work will be recognised and appreciated; in charge; unqualified. 622/412, C. & D. London Office.

**PART-TIME** desired by experienced senior man, London area, CDB/420, C. & D. London Office.

### WHOLESALE

**EAST LONDON AND EASTERN COUNTIES.** Advertiser who has maintained very valuable connexion during war, requires representation on commission and expenses. Own car, adequate references and sales record. Only reputable firms entered. 622/433, C. & D. London Office.

**EXECUTIVE** (32) wishes to contact Chemical Manufacturer desiring to form Re-sale Section or expand existing department. 622/409, C. & D. London Office.

**EXPERIENCED** Traveller with excellent connexion Chemist and Domestic Stores, Essex London, desires change. 622/431, C. & D. London Office.

**GENTLEMAN**, over 30 years' experience retail, 25 years West End, desires position as Representative, or on inside staff of first-class firm, where ability and hard work will be recognised and appreciated. 622/411, C. & D. London Office.

**RETAIL.** Senior Assistant (Unqualified), good all-round man of smart appearance. Dispenser-Prescriber. Practice over wide territory, Edinburgh to Channel Isles. Would consider Office Work and/or post as Foreman Process Worker (experienced). Valuable man for small progressive firm. Write, Greene, 50A Turnham Greene Terrace, Chiswick, W.4.

**SCOTSMAN** (36), Qualified, requires executive post with reputable British House. Considerable experience as medical representative in U.K. and of direction of agents, sales promotion, and control of representatives in India, Burma and Ceylon. Would prefer U.K. appointment with periodic trips abroad for market surveys, appointment of dealers, etc., or would consider returning East. Naval Officer at present in India. Release expected shortly. 622/426, C. & D. London Office.

## BUSINESSES FOR DISPOSAL

7/6 for 40 words or less, 2d. for every additional word.

**IMPORTANT** Business for sale in Norfolk market town with Optics and Wine Licence, N.H.I., Photo. Turnover £11,133. Accountant's figures just completed. Pleasant old-fashioned, double-fronted shop facing south, two 12-ft. windows with huge covered yard and storage rooms at back. Only earnest buyers will be replied to and must be accompanied by reference. 622/416, C. & D. London Office.

**SOUTH COAST** progressive Business, main road, prominent position, modern property. Kodak, etc., agencies. Turnover over £2,000. Fittings, fixtures, stock and goodwill £1,500. Retiring. 622/410 C. & D. London Office.

## BUSINESS OPPORTUNITIES

7/6 for 40 words or less, 2d. for every additional word.

**FIRST-CLASS** Wholesale Distribution to Pharmacists required by manufacturers of high-grade Proprietary Pharmaceuticals. Please write, 621/390, C. & D. London Office.

**MEDICAL REPRESENTATION.** Prominent firm of Manufacturing Chemists (ethical) having first-class medical propaganda dept. covering the whole of the country, are prepared to introduce not more than three ethical preparations to the medical profession, subject to their being not competitive with own preparations. Write in confidence for terms and particulars. 619/326, C. & D. London Office.

**TABLET** Manufacturers, London Area, can undertake further work of pressing off clients' own materials. Capacity for Tablets of 5 gr. to 15 gr. weight. Small and large quantities are of interest. Packing facilities can also be offered, but containers should be supplied. 620/348, C. & D. London Office.

## MISCELLANEOUS SALES

12/6 for 60 words or less, 1/- each additional 10 words or less

**FOR** Sale, 6 x 6/9 Bayers' Anaesthesia Powder, 10s.; 1 x 10/8 Bayers' Combral Tablets, 5 grains; 4 x 5/- Sulphanilamide Tulle; 5 x 4/6 Albucid Tablets, 20 x 7½ grain; above 10% off list price, purchase tax where applicable; 1-lb. Phenazone Cryst. B.P., 18s.; 7-lb. Isinglass Brazil, No. 2, 9s. lb. Frank Jones (Chemist), Ltd., Houghton-le-Spring, co. Durham.

**250** GROSS No. 1 Tablet Bottles complete with Caps and Wads. 620/356, C. & D. London Office.

## BUSINESSES WANTED

7/6 for 40 words or less, 2d. for every additional word.

**PHARMACIST** requires Business, Essex or Suffolk borders. Good living accommodation essential. Turnover about £2,000-£2,500. No optics. All replies in strict confidence. 620/350, C. & D. London Office.

## PARTNERSHIPS

**A**DVERTISER wishes to contact established Pharmaceutical Toilet and/or Cosmetic products concern, preferably London district, with view to active and financial interest. Experienced literature, printing, advertising, packaging. 621/376, C. & D. London Office.

## EXPORT TRADE

**L**ONDON EXPORTERS with agencies in many overseas markets desire to get in touch with Manufacturers who wish to develop their export trade. G. & W. Field, Ltd., 44 Theobalds Rd., W.C.1.

**M**ANUFACTURING Chemists desire to contact British Exporters with London office, dealing directly with customers in the Dominions and Colonies; able to handle large quantities. 622/417, C. & D. London Office.

**P**ALESTINE & NEIGHBOURING COUNTRIES. Skilled Druggist, 25 years' experience, seeks exclusive agencies from competitive manufacturers of chemicals, drugs, raw materials, dyestuffs, druggists' sundries, specialities. Please write full details to Erwin Arnheim, 39 Massada St., Haifa (Palestine).

**S**IM COMPANY, Naarden, Holland, Juliana van Stolberglaan 17, asks you to write about any capsule-business with Holland.

**S**OCIÉTÉ WALTER BUCHI, 101, rue St. Lazare, Paris (9ème), wants Representative, on own account, for Needles Hypod. Syringes, Pharmaceutical Products and Accessories, Surgical Instruments, etc., etc.; bankers' references. Société Générale, Banque Nat. pour le Commerce et l'Industrie.

## APPOINTMENTS

### COUNTY BOROUGH OF SOUTHEND-ON-SEA SOUTHEAST MUNICIPAL HOSPITAL, ROCHFORD, ESSEX

The Health Committee of the Council invite applications for the post of Non-Resident ASSISTANT PHARMACIST at the above Hospital. Candidates should hold one of the registrable qualifications of the Pharmaceutical Society. The salary is at the rate of £250 per annum, rising by increments of £10 to a maximum of £300, plus cost of living bonus, at present £59 16s. per annum for males and £48 2s. for females. The provisions of the Local Government and Other Officers' Superannuation Act, 1937, will apply, and the person appointed must satisfy the Council's Medical Examiner.

Application forms, which can be obtained from the Medical Superintendent of the Hospital, must be completed and returned to him as soon as possible.  
H. J. WO WOOD,  
July, 1945. *Town Clerk.*

### MAIDA VALE HOSPITAL FOR NERVOUS DISEASES

Applications are invited for the post of ASSISTANT DISPENSER (Apothecaries' Hall). Salary according to experience. Application with copies of two Testimonials should be addressed to the Secretary as soon as possible.

**P**HARMACIST required to act as Assistant in busy institutional and hospital dispensary. salary £350 p.a. inclusive. Apply in writing giving full particulars and copies of recent testimonials to The Secretary, G.W.R. Medical Fund Society, Milton Road, Swindon, Wilts.

### RUNWELL EMERGENCY HOSPITAL

NEAR WICKFORD, ESSEX  
(180 BEDS)

ASSISTANT DISPENSER REQUIRED. Salary £160 per annum, plus War Bonus of £48 2s. per annum and emoluments valued at £20 per annum. Board and lodging provided in the Hospital if required at a weekly charge of 22s. Apply, giving full details of age, experience and qualifications, and copies of testimonials to the Medical Superintendent, as soon as possible.

## WESTMINSTER HOSPITAL

**ST. JOHN'S GARDENS, LONDON, S.W.1.**  
Applications are invited for the appointment of an ASSISTANT PHARMACIST, either sex. Salary in accordance with experience. Federated Superannuation Scheme in force.

Applications, stating age, experience, and when free, together with copies of testimonials, should be submitted immediately to the House Governor.

## AGENCIES

*7/6 for 36 words or less, 2d. for every additional word.*

**A**GENCIES wanted, West of England, Cornwall, Devon, South Wales. Full particulars please 622/421, C. & D. London Office.

**A.** M. ADAMS, Warwick Chambers, 20 W. Campbell Street, Glasgow, C.2. Looking for agency with post-war possibilities. This is a first class representation, with all leading Stores, Co-ops, Societies, Hairdressers in Scotland. Only lines of repute will be considered. The Principal of the Company will be in London early September.

**N**EW lines invited by long-established distributing company. Sales force covers England, Scotland, Wales and Northern Ireland, and calls on Departmental Stores, Chemists and High-class Laid Hairdressers. Particulars to British & International Proprietors, Ltd., 30 Budge Row, E.C.4.

**R**EPRESENTATIVE with 15 years' experience calling on Departmental Stores, Wholesale and Retail Chemists in Lancs, Yorks and Cheshire, is open for agency. Commission or salary. Reputable firm only entertained. 622/418, C. & D. London Office.

**S**PAIN. Agent with wide connexions and experience desires to contact British manufacturers pharmaceutical products and photographic material willing to be represented in Spain. 622/420, C. & D. London Office.

**U**P-TO-DATE DISTRIBUTING ORGANISATION with large staff of Travellers covering the whole country, over 15,000 open accounts, rapidly increasing with Chemists, Grocers, Hardware Dealers, Stores, Multiples, etc., will undertake exclusive Representations, on either Commission or Cash basis. Only first-class products with extensive sales possibilities will be entertained. Manufacturer will be expected to support sales by a reasonable amount of advertising as soon as adequate distribution has been secured. All communications strictest confidence to 622/424, C. & D. London Office.

## WANTED

*7/6 for 36 words or less, 2d. for every additional word.*

**A**SPIRIN Powder, Grams or Crystals, wanted large or small quantities. 618/291, C. & D. London Office.

**B**OTTLES wanted, any colour, shape or size, plain or medicals preferred. Large or small quantities bought for cash. Also job lines in Glass, Tin, Cardboard Containers. Offers to Messrs. Kemp Ltd., Batley, Yorks.

**C**ASH Registers, National, Remington and Gledhill. Wanted for spot cash. All sizes, a immaterial, any quantity entertained. Amalgamated Business Machines, Ltd., 64 Mortimer Street, Oxford Circus, W.1. Phone MUSEUM 0941. Repairs, Sales, Exchanges, Supplies, Rolls, Ribbons, etc.

**I**ODOLYSIN Capsules (A. & H.), one or two boxes. Snape, 13 Great Hampton Street, Birmingham.  
**R**EGISTERED WHOLESALE SUNDRY HOUSES. London area, requires Nail Files, Sponge Brushes, Bottles, Blades, Combs, Towels, etc., etc. reputable manufacturers, please, only reply. 622/41 C. & D. London Office.

**T**HEELOL Capsules (Parke Davis) urgently required. Symington, Hollybush Corner, Harlow, Common, Surrey.

**W**ANTED Liquid Paraffin B.P., Packed or Bulk. Saccharin Tablets. 4-oz and 8-oz. Screw Cap Bottles. Write to 622/432, C. & D. London Office.

**W**ANTED, National Cash Register. Cheetham, Mercer Row, Louth.





# SANTONIN

Manufactured at our  
Garden City Factory  
from **BRITISH EMPIRE**  
**A R T E M I S I A**

**CARNEGIE CHEMICALS (WELWYN) LTD**

*Manufacturers of Fine Chemicals*

**WELWYN GARDEN CITY**

**HERTFORDSHIRE**



## **An Explanation . . . and Apology**

War-time shortages of materials have recently caused delays in our deliveries and have forced upon us the necessity of confining the supply of the large size exclusively to requirements for Physician's private prescriptions, Hospital and N.H.I. dispensing purposes.

FELSOL is not discontinued, the 2/10 size remains available, but this too must, for the time being, at least, be regarded as in short supply.

Gratefully acknowledging the co-operation of our many Pharmaceutical Friends, we apologise for any inconvenience these temporarily enforced conditions, beyond our control, may impose and give the assurance that every effort is made to ensure the fairest possible distribution by executing all orders in strict rotation.

### **BRITISH FELSOL COMPANY LTD**

WIGTON HOUSE, 206-212 ST JOHN STREET, CLERKENWELL, LONDON, E.C.1.  
Telephone: CLERkenwell 5862 Cables: 'Felsol' Smith, London.





